

X-537-65-217

5

N66-14256

ACQUISITION NUMBER (THRU) 1
(PAGES) 55
(CODE) 31
(CATEGORY) 31
TMX 37062
(NASA CR OR TMX OR AD NUMBER)

FACILITY FORM 602

SPACE OPERATIONS CONTROL CENTER SATELLITE SITUATION REPORT

VOL. 5, NO. 20

GPO PRICE \$

CFSTI PRICE(S) \$

Hard copy (HC) 3.00

Microfiche (MF) .50

653 July 65

OCTOBER 31, 1965



GODDARD SPACE FLIGHT CENTER

GREENBELT, MD.

SPACE OPERATIONS CONTROL CENTER
GODDARD SPACE FLIGHT CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME 5, NO. 20

OCTOBER 31, 1965

SATELLITE SITUATION REPORT

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED
BY THE GODDARD SPACE FLIGHT CENTER, NORAD, AND SMITHSONIAN
ASTROPHYSICAL OBSERVATORY AS OF 1200Z ON OCTOBER 31, 1965

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCLI- NATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|---------------|------------------|-----------------------------|---------------|---------------|---------------------------|--------------------------|-----------------------|------------------------|--------------------------------------|
| 1958 LAUNCHES | | | | | | | | | |
| ALPHA 1 | EXPLORER 1 | 004 | US | 1 FEB | 104.0 | 33.18 | 1542 | 348 | |
| BETA 1 | ROCKET BODY | 016 | US | 17 MAR | 138.4 | 34.27 | 4319 | 649 | |
| BETA 2 | VANGUARD 1 | 005 | US | 17 MAR | 134.0 | 34.22 | 3928 | 661 | |
| BETA 3 | | 1576 | US | 17 MAR | 132.7 | 34.21 | 3816 | 662 | |
| 1959 LAUNCHES | | | | | | | | | |
| ALPHA 1 | VANGUARD 2 | 011 | US | 17 FEB | 125.4 | 32.88 | 3284 | 556 | |
| ALPHA 2 | ROCKET BODY | 012 | US | 17 FEB | 129.7 | 32.92 | 3656 | 555 | |
| ETA 1 | VANGUARD 3 | 020 | US | 18 SEP | 129.8 | 33.34 | 3714 | 512 | |
| MU 1 | LUNIK 1 | 112 | USSR | 2 JAN | HELIOCENTRIC ORBIT | | | | |
| NU 1 | PIONEER 4 | 113 | US | 3 MAR | HELIOCENTRIC ORBIT | | | | |
| IOTA 1 | EXPLORER 7 | 022 | US | 13 OCT | 101.1 | 50.39 | 1067 | 557 | |
| IOTA 2 | ROCKET BODY | 023 | US | 13 OCT | 100.9 | 50.37 | 1052 | 549 | |
| 1960 LAUNCHES | | | | | | | | | |
| ALPHA 1 | PIONEER 5 | 027 | US | 11 MAR | HELIOCENTRIC ORBIT | | | | |
| BETA 1 | ROCKET BODY | 028 | US | 1 APR | 99.1 | 48.41 | 733 | 698 | |
| BETA 2 | TIROS 1 | 029 | US | 1 APR | 99.2 | 48.45 | 741 | 698 | |
| BETA 3 | NONE | 101 | US | 1 APR | 97.9 | 48.49 | 695 | 617 | |
| BETA 4 | NONE | 115 | US | 1 APR | 99.9 | 48.15 | 807 | 698 | |
| GAMMA 2 | TRANSIT 1F | 031 | US | 13 APR | 93.6 | 51.22 | 554 | 344 | |
| GAMMA 4 | NONE | 099 | US | 13 APR | 96.7 | 51.28 | 721 | 480 | |
| ZETA 1 | MIDAS 2 | 043 | US | 24 MAY | 94.3 | 33.03 | 487 | 477 | |
| ETA 1 | TRANSIT 2A | 045 | US | 22 JUN | 101.6 | 66.72 | 1061 | 610 | |
| ETA 2 | GREB | 046 | US | 22 JUN | 101.6 | 66.70 | 1059 | 609 | |
| ETA 3 | ROCKET BODY | 047 | US | 22 JUN | 101.4 | 66.70 | 1042 | 609 | |
| ETA 4 | | 840 | US | 22 JUN | 101.5 | 66.71 | 1056 | 608 | |
| ETA 5 | | 841 | US | 22 JUN | 101.5 | 66.69 | 1050 | 610 | |

OBJECTS IN ORBIT

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | PERIOD MINUTES | INCLINATION | APOGEE Km. | PERIGEE Km. | TRANSMITTING FREQ. (MC/S) |
|------------------------|---------------|---------------------|--------|--------|---------------------------------|-------------|---------------|----------------|------------------------------|
| 1960 LAUNCHES (CONT'D) | | | | | | | | | |
| IOTA 1 | ECHO 1 | 049 | US | 12 AUG | 113.5 | 47.25 | 1494 | 1279 | |
| IOTA 2 | ROCKET BODY | 050 | US | 12 AUG | 118.1 | 47.25 | 1686 | 1500 | |
| IOTA 3 | METAL OBJECT | 051 | US | 12 AUG | 118.2 | 47.30 | 1681 | 1522 | |
| IOTA 4 | METAL OBJECT | 052 | US | 12 AUG | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| IOTA 5 | METAL OBJECT | 053 | US | 12 AUG | 118.4 | 47.33 | 1684 | 1536 | |
| NU 1 | COURIER 1B | 058 | US | 4 OCT | 107.0 | 28.31 | 1212 | 962 | |
| NU 2 | ROCKET BODY | 059 | US | 4 OCT | 106.6 | 28.21 | 1211 | 920 | |
| XI 1 | EXPLORER 8 | 060 | US | 3 NOV | 112.3 | 49.90 | 2246 | 413 | |
| XI 2 | ROCKET BODY | 062 | US | 3 NOV | 111.8 | 49.94 | 2194 | 420 | |
| XI 3 | NONE | 069 | US | 3 NOV | 108.7 | 49.39 | 1929 | 397 | |
| XI 4 | NONE | 105 | US | 3 NOV | 110.2 | 50.49 | 2047 | 422 | |
| PI 1 | TIROS 2 | 063 | US | 23 NOV | 98.2 | 48.56 | 729 | 618 | |
| PI 2 | ROCKET BODY | 064 | US | 23 NOV | 98.1 | 48.55 | 725 | 609 | |
| PI 3 | NONE | 074 | US | 23 NOV | 98.1 | 48.52 | 722 | 617 | |
| PI 4 | NONE | 075 | US | 23 NOV | 98.3 | 48.53 | 731 | 621 | |
| 1961 LAUNCHES | | | | | | | | | |
| ALPHA 1 | SAMOS 2 | 070 | US | 31 JAN | 94.7 | 97.38 | 533 | 476 | |
| ALPHA 2 | METAL OBJECT | 079 | US | 31 JAN | 94.6 | 97.38 | 532 | 468 | |
| GAMMA 1 | VENUS PROBE | 080 | USSR | 12 FEB | HELIOCENTRIC ORBIT | | | | |
| DELTA 2 | ROCKET BODY | 082 | US | 16 FEB | 118.5 | 38.84 | 2595 | 627 | |
| DELTA 3 | NONE | 085 | US | 16 FEB | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| KAPPA 1 | EXPLORER 10 | 098 | US | 25 MAR | POSITION UNCERTAIN | | | | |
| NU 1 | EXPLORER 11 | 107 | US | 27 APR | 107.9 | 28.77 | 1778 | 481 | |
| OMICRON 1 | TRANSIT 4A | 116 | US | 29 JUN | 103.8 | 66.85 | 1005 | 874 | |
| OMICRON 2 | INJUN-SR-3 | 117 | US | 29 JUN | 103.8 | 66.84 | 1004 | 877 | |
| OMICRON 3-208** | METAL OBJECTS | | US | 29 JUN | | | | | |
| RHO 1 | TIROS 3 | 162 | US | 12 JUL | 100.4 | 47.92 | 811 | 743 | |
| | | | | | | | | | \$54\$324\$150\$400 |

\$54\$324\$150\$400

OBJECTS IN ORBIT

TRANSMITTING
FREQ. (MC/S)

PERIGEE
Km.

APOGEE
Km.

INCLI-
NATION

PERIOD
MINUTES

LAUNCH

SOURCE

CATALOGUE
NUMBER

CODE NAME

OBJECT

1961 LAUNCHES (CONT'D)

| | | | | | | | | | |
|-----------|--------------|-----|----|--------|---------|-------------------------|------|------|--|
| RHO 2 | ROCKET BODY | 165 | US | 12 JUL | 100.3 | 47.90 | 805 | 742 | |
| RHO 3 | METAL OBJECT | 166 | US | 12 JUL | 98.8 | 47.93 | 795 | 610 | |
| RHO 4 | METAL OBJECT | 167 | US | 12 JUL | 102.0 | 47.87 | 931 | 775 | |
| SIGMA 1 | MIDAS 3 | 163 | US | 12 JUL | 161.5 | 91.35 | 3533 | 3358 | |
| SIGMA 3 | METAL OBJECT | 188 | US | 12 JUL | 161.1 | 91.18 | 3541 | 3323 | |
| SIGMA 4 | METAL OBJECT | 196 | US | 12 JUL | 161.9 | 91.23 | 3576 | 3349 | |
| UPSILON 1 | EXPLORER 12 | 170 | US | 16 AUG | CURRENT | ELEMENTS NOT MAINTAINED | | | |
| A DELTA 1 | MIDAS 4 | 192 | US | 21 OCT | 166.0 | 95.85 | 3752 | 3501 | |
| A DELTA 3 | METAL OBJECT | 194 | US | 21 OCT | 165.6 | 95.83 | 3738 | 3483 | |
| A DELTA 4 | METAL OBJECT | 195 | US | 21 OCT | 166.4 | 95.84 | 3804 | 3483 | |
| A ETA 1 | TRANSIT 4B | 202 | US | 15 NOV | 105.8 | 32.42 | 1107 | 952 | |
| A ETA 2 | TRAAC | 205 | US | 15 NOV | 105.8 | 32.42 | 1105 | 936 | |
| A ETA 3 | ROCKET BODY | 204 | US | 15 NOV | 105.6 | 32.42 | 1094 | 952 | |

1962 LAUNCHES

| | | | | | | | | | |
|-----------|------------------|-----|-------|--------|--------------------|-------|------|------|---------|
| ALPHA 1 | RANGER 3 | 221 | US | 26 JAN | HELIOCENTRIC ORBIT | | | | |
| ALPHA 2 | ROCKET BODY | 222 | US | 26 JAN | HELIOCENTRIC ORBIT | | | | |
| BETA 1 | TIROS 4 | 226 | US | 8 FEB | 100.4 | 48.31 | 844 | 707 | |
| BETA 2 | ROCKET BODY | 227 | US | 8 FEB | 101.4 | 48.14 | 942 | 702 | |
| BETA 3 | METAL OBJECT | 228 | US | 8 FEB | 99.5 | 48.41 | 763 | 702 | |
| BETA 4 | METAL OBJECT | 229 | US | 8 FEB | 100.3 | 48.35 | 839 | 705 | |
| ZETA 1 | ORB. SOL. OBS. 1 | 255 | US | 7 MAR | 96.0 | 32.83 | 592 | 541 | |
| ZETA 2 | ROCKET BODY | 257 | US | 7 MAR | 96.0 | 32.83 | 586 | 542 | |
| KAPPA 1 | | 271 | US | 9 APR | 153.0 | 86.77 | 3412 | 2784 | |
| KAPPA 3 | | 273 | US | 9 APR | 152.6 | 86.64 | 3369 | 2797 | |
| KAPPA 4 | | 274 | US | 9 APR | 153.3 | 86.70 | 3423 | 2803 | |
| MU 2 | ROCKET BODY | 282 | US | 23 APR | HELIOCENTRIC ORBIT | | | | |
| OMICRON 1 | ARIEL | 285 | US/UK | 26 APR | 100.4 | 53.90 | 1168 | 386 | 136.405 |
| OMICRON 2 | ROCKET BODY | 288 | US | 26 APR | 100.3 | 53.91 | 1152 | 388 | |

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCL- NATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|------------------------|------------------|-----------------------------|---------------|---------------|---------------------------------|-------------------------|-----------------------|------------------------|--------------------------------------|
| 1962 LAUNCHES (CONT'D) | | | | | | | | | |
| A ALPHA 1 | TIROS 5 | 309 | US | 19 JUN | 100.5 | 58.17 | 966 | 596 | |
| A ALPHA 2 | ROCKET BODY | 311 | US | 19 JUN | 100.4 | 58.18 | 936 | 597 | |
| A ALPHA 3 | METAL OBJECT | 312 | US | 19 JUN | 101.7 | 58.21 | 1083 | 599 | |
| A ALPHA 4 | METAL OBJECT | 313 | US | 19 JUN | 99.1 | 57.99 | 852 | 579 | |
| A EPSILON 1 | TELSTAR 1 | 340 | US | 10 JUL | 157.8 | 44.88 | 5639 | 948 | |
| A EPSILON 2 | ROCKET BODY | 341 | US | 10 JUL | 157.6 | 44.79 | 5628 | 946 | |
| A OMICRON 1 | | 369 | US | 23 AUG | 99.5 | 98.70 | 858 | 616 | |
| A OMICRON 2 | | 370 | US | 23 AUG | 98.2 | 98.62 | 745 | 605 | |
| A OMICRON 3 | | 378 | US | 23 AUG | 100.8 | 98.78 | 974 | 620 | |
| A OMICRON 4 | | 388 | US | 23 AUG | 99.5 | 98.71 | 854 | 618 | |
| A RHO 1 | MARINER 2 | 374 | US | 27 AUG | HELIOCENTRIC ORBIT | | | | |
| A RHO 2 | ROCKET BODY | 375 | US | 27 AUG | HELIOCENTRIC ORBIT | | | | |
| A PSI 1 | TIROS 6 | 397 | US | 18 SEP | 98.7 | 58.36 | 714 | 682 | |
| A PSI 2 | ROCKET BODY | 398 | US | 18 SEP | 98.6 | 58.35 | 709 | 680 | |
| A PSI 3 | METAL OBJECT | 399 | US | 18 SEP | 99.4 | 58.45 | 775 | 683 | |
| A PSI 4 | METAL OBJECT | 400 | US | 18 SEP | 98.0 | 58.21 | 687 | 642 | |
| B ALPHA 1 | ALOUETTE | 424 | CANADA | 29 SEP | 105.5 | 80.49 | 1036 | 999 | |
| B ALPHA 2 | ROCKET BODY | 426 | US | 29 SEP | 105.4 | 80.47 | 1031 | 1000 | |
| B ALPHA 3 | METAL OBJECT | 510 | US | 29 SEP | 105.4 | 80.51 | 1024 | 1001 | |
| B ALPHA 4 | METAL OBJECT | 511 | US | 29 SEP | 105.5 | 80.44 | 1043 | 993 | |
| B GAMMA 1 | EXPLORER 14 | 432 | US | 2 OCT | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| B GAMMA 2# | ROCKET BODY | NNA | US | 2 OCT | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| B ETA 1 | RANGER 5 | 439 | US | 18 OCT | HELIOCENTRIC ORBIT | | | | |
| B ETA 2 | ROCKET BODY | 440 | US | 18 OCT | HELIOCENTRIC ORBIT | | | | |
| B KAPPA 1 | | 444 | US | 26 OCT | 124.1 | 71.44 | 3526 | 188 | |
| B LAMBDA 1 | EXPLORER 15 | 445 | US | 27 OCT | 311.5 | 18.04 | 17369 | 307 | |
| B LAMBDA 2# | ROCKET BODY | NNA | US | 27 OCT | INSUFFICIENT OBSERVATIONS | | | | |
| B MU 1 | ANNA 1B | 446 | US | 31 OCT | 107.9 | 50.13 | 1183 | 1076 | \$162\$324 |

\$136.591\$136.078

OBJECTS IN ORBIT

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | PERIOD MINUTES | INCL- NATION | APOGEE Km. | PERIGEE Km. | TRANSMITTING FREQ. (MC/S) |
|--------|-----------|---------------------|--------|--------|-------------------|-----------------|---------------|----------------|------------------------------|
|--------|-----------|---------------------|--------|--------|-------------------|-----------------|---------------|----------------|------------------------------|

1962 LAUNCHES (CONT'D)

| | | | | | | | | | |
|-------------|-------------|-----|------|--------|--------------------|-------|------|------|-------------------|
| B MU 2 | ROCKET BODY | 447 | US | 31 OCT | 107.6 | 50.21 | 1161 | 1072 | |
| B NU 3 | | 450 | USSR | 1 NOV | HELIOCENTRIC ORBIT | | | | |
| B TAU 1 | | 502 | US | 13 DEC | 104.3 | 70.36 | 1697 | 225 | |
| B TAU 2 | INJUN 3 | 504 | US | 13 DEC | 110.1 | 70.35 | 2225 | 238 | |
| B TAU 4 | | 508 | US | 13 DEC | 95.7 | 70.31 | 866 | 212 | |
| B TAU 5 | | 513 | US | 13 DEC | 104.2 | 70.30 | 1681 | 227 | |
| B TAU 6 | | 520 | US | 13 DEC | 109.0 | 70.33 | 2117 | 238 | |
| B UPSILON 1 | RELAY 1 | 503 | US | 13 DEC | 185.1 | 47.53 | 7437 | 1321 | \$136.140;136.621 |
| B UPSILON 2 | ROCKET BODY | 515 | US | 13 DEC | 184.8 | 47.53 | 7422 | 1319 | |
| B CHI 1 | EXPLORER 16 | 506 | US | 16 DEC | 104.4 | 52.09 | 1172 | 757 | |
| B PSI 1 | TRANSIT 5A | 509 | US | 19 DEC | 99.1 | 90.66 | 736 | 694 | |
| B PSI 2 | | 514 | US | 19 DEC | 97.6 | 90.76 | 716 | 576 | |
| B PSI 3 | | 519 | US | 19 DEC | 99.1 | 90.65 | 734 | 696 | |
| B PSI 4 | | 523 | US | 19 DEC | 100.2 | 90.49 | 835 | 702 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

1963 LAUNCHES

| | | | | | | | | | |
|----------|-------------|-----|------|--------|---------------------------------|--------|-------|-----|--|
| 1963 03A | | 527 | US | 16 JAN | 94.4 | 81.90 | 522 | 458 | |
| 1963 04A | SYNCOM 1 | 553 | US | 14 FEB | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| 1963 04B | ROCKET BODY | 532 | US | 14 FEB | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| 1963 05A | | 533 | US | 19 FEB | 97.7 | 100.48 | 795 | 500 | |
| 1963 05B | | 534 | US | 19 FEB | 97.7 | 100.50 | 796 | 502 | |
| 1963 05C | | 535 | US | 19 FEB | 96.8 | 100.47 | 740 | 471 | |
| 1963 05D | | 536 | US | 19 FEB | 98.3 | 100.48 | 836 | 521 | |
| 1963 08D | | 566 | USSR | 2 APR | BARYCENTRIC ORBIT | | | | |
| 1963 09A | EXPLORER 17 | 564 | US | 3 APR | 93.5 | 57.62 | 645 | 241 | |
| 1963 13A | TELSTAR 2 | 573 | US | 7 MAY | 225.3 | 42.77 | 10805 | 967 | |

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCLIN- NATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|------------------------|---|-----------------------------|---------------|---------------|---------------------------|---------------------------|-----------------------|------------------------|--------------------------------------|
| 1963 LAUNCHES (CONT'D) | | | | | | | | | |
| 1963 13B | ROCKET BODY | 575 | US | 7 MAY | 225.1 | 42.78 | 10789 | 967 | |
| 1963 14A | | 574 | US | 9 MAY | 166.4 | 87.39 | 3678 | 3613 | |
| 1963 14B | | 579 | US | 9 MAY | 166.4 | 87.30 | 4149 | 3142 | |
| 1963 14C | | 608 | US | 9 MAY | 166.4 | 87.34 | 3688 | 3602 | |
| 1963 14D | | 589 | US | 9 MAY | CURRENT | ELEMENTS NOT MAINTAINED | | | |
| 1963 14E | | 602 | US | 9 MAY | 166.1 | 87.35 | 3653 | 3610 | |
| 1963 14F | | 628 | US | 9 MAY | 166.8 | 87.34 | 3669 | 3652 | |
| 1963 14G | | 629 | US | 9 MAY | 166.4 | 87.33 | 3707 | 3583 | |
| 1963 14H | | 702 | US | 9 MAY | 166.4 | 87.33 | 3672 | 3618 | |
| 1963 22A | | 594 | US | 16 JUN | 99.7 | 90.02 | 761 | 728 | \$150\$400 |
| 1963 22B | | 603 | US | 16 JUN | 99.7 | 90.01 | 759 | 731 | |
| 1963 22C | | 610 | US | 16 JUN | 101.2 | 90.20 | 891 | 742 | |
| 1963 22D | | 611 | US | 16 JUN | 98.1 | 89.79 | 766 | 571 | |
| 1963 24A | TIROS 7 | 604 | US | 19 JUN | 97.4 | 58.28 | 652 | 619 | \$136.233\$136.924 |
| 1963 24B | ROCKET BODY | 605 | US | 19 JUN | 97.3 | 58.28 | 646 | 616 | |
| 1963 24C | METAL OBJECT | 606 | US | 19 JUN | 97.9 | 58.39 | 682 | 632 | |
| 1963 24D | METAL OBJECT | 607 | US | 19 JUN | 96.9 | 58.11 | 645 | 573 | |
| 1963 25B | | 614 | US | 27 JUN | 132.1 | 82.17 | 4092 | 336 | |
| 1963 26A | RESEARCH SATELLITE FOR GEOPHYSICS | 612 | US | 28 JUN | 102.0 | 49.80 | 1292 | 414 | |
| 1963 27A | | 613 | US | 29 JUN | 94.6 | 82.33 | 520 | 484 | |
| 1963 30A | | 622 | US | 18 JUL | 167.8 | 88.49 | 3736 | 3669 | |
| 1963 30B | | 635 | US | 18 JUL | 166.7 | 89.48 | 3996 | 3299 | |
| 1963 30C | | 630 | US | 18 JUL | 167.5 | 88.42 | 3719 | 3658 | |
| 1963 30D | | 624 | US | 18 JUL | 167.5 | 88.05 | 4579 | 2795 | |
| 1963 30E | | 631 | US | 18 JUL | 168.3 | 88.45 | 3782 | 3658 | |

OBJECTS IN ORBIT

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | PERIOD MINUTES | INCLI- NATION | APOGEE Km. | PERIGEE Km. | TRANSMITTING FREQ. (MC/S) |
|------------------------|--------------------------|---------------------|--------|--------|-------------------|-------------------------|---------------|----------------|--|
| 1963 LAUNCHES (CONT'D) | | | | | | | | | |
| 1963 31A | SYNCOM 2 | 634 | US | 26 JUL | 1436.0 | 31.78 | 35810 | 35759 | \$136.467\$136.980 \$1814.069 \$1815.794 \$1820.177 |
| 1963 31B | ROCKET BODY | 625 | US | 26 JUL | CURRENT | ELEMENTS NOT MAINTAINED | | | |
| 1963 38A | | 669 | US | 28 SEP | 107.1 | 89.92 | 1110 | 1077 | |
| 1963 38B | | 670 | US | 28 SEP | 107.4 | 89.91 | 1136 | 1075 | |
| 1963 38C | | 671 | US | 28 SEP | 107.3 | 89.92 | 1129 | 1081 | |
| 1963 38D | | 672 | US | 28 SEP | 107.3 | 89.93 | 1130 | 1078 | |
| 1963 38E | | 745 | US | 28 SEP | 107.1 | 89.93 | 1104 | 1082 | |
| 1963 39A | | 674 | US | 17 OCT | 6481.3 | 37.97 | 116742 | 100803 | \$136.653\$162\$324 |
| 1963 39B | | 675 | US | 17 OCT | CURRENT | ELEMENTS NOT MAINTAINED | | | |
| 1963 39C | | 692 | US | 17 OCT | 6512.3 | 37.02 | 115029 | 103251 | |
| 1963 43A | | 683 | USSR | 1 NOV | 102.2 | 58.93 | 1392 | 337 | |
| 1963 43B | POLYOT 1 | 684 | USSR | 1 NOV | 98.8 | 58.64 | 1064 | 339 | |
| 1963 43D | | 686 | USSR | 1 NOV | 98.6 | 59.84 | 1047 | 332 | |
| 1963 46A | | 693 | US | 27 NOV | 5610.7 | 35.20 | 192042 | 4385 | |
| 1963 47A | EXPLORER 18 CENTAUR 2 | 694 | US | 27 NOV | 107.8 | 30.36 | 1775 | 472 | |
| 1963 47B | | 696 | US | 27 NOV | 107.2 | 30.05 | 1614 | 579 | |
| 1963 47C | | 697 | US | 27 NOV | 107.5 | 30.06 | 1637 | 577 | |
| 1963 47D | | 698 | US | 27 NOV | 108.0 | 29.91 | 1658 | 610 | |
| 1963 47E | | 699 | US | 27 NOV | 108.6 | 30.43 | 1745 | 576 | |
| 1963 47F | | 700 | US | 27 NOV | 108.6 | 30.45 | 1749 | 576 | |
| 1963 47G | | 701 | US | 27 NOV | 107.8 | 29.98 | 1643 | 607 | |
| 1963 47H | | 739 | US | 27 NOV | 105.9 | 30.40 | 1584 | 486 | |
| 1963 49A | | 703 | US | 5 DEC | 106.8 | 89.94 | 1097 | 1063 | |
| 1963 49B | | 704 | US | 5 DEC | 107.1 | 89.94 | 1123 | 1067 | \$150\$400 |

OBJECTS IN ORBIT

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | PERIOD MINUTES | INCL- NATION | APOGEE Km. | PERIGEE Km. | TRANSMITTING FREQ. (MC/S) |
|------------------------|------------------------------|---------------------|--------|--------|-------------------|-----------------|---------------|----------------|------------------------------|
| 1963 LAUNCHES (CONT'D) | | | | | | | | | |
| 1963 49C | EXPLORER 19 | 705 | US | 5 DEC | 107.1 | 89.94 | 1123 | 1065 | \$136.231\$136.924 |
| 1963 49D | | 706 | US | 5 DEC | 107.1 | 89.95 | 1125 | 1058 | |
| 1963 49E | | 715 | US | 5 DEC | 107.1 | 89.99 | 1115 | 1071 | |
| 1963 49F | | 753 | US | 5 DEC | 107.1 | 89.96 | 1122 | 1067 | |
| 1963 53A | | 714 | US | 19 DEC | 115.2 | 78.67 | 2289 | 639 | |
| 1963 53B | 721 | US | 19 DEC | 115.8 | 78.65 | 2398 | 592 | | |
| 1963 53C | 722 | US | 19 DEC | 115.8 | 78.64 | 2380 | 601 | | |
| 1963 53D | 723 | US | 19 DEC | 115.8 | 78.66 | 2390 | 599 | | |
| 1963 53E | 724 | US | 19 DEC | 115.9 | 78.45 | 2352 | 643 | | |
| 1963 53F | 725 | US | 19 DEC | 115.8 | 78.71 | 2365 | 616 | | |
| 1963 53G | 726 | US | 19 DEC | 115.8 | 78.61 | 2381 | 600 | | |
| 1963 53H | 732 | US | 19 DEC | 115.8 | 78.59 | 2373 | 611 | | |
| 1963 54A | TIROS 8 | 716 | US | 21 DEC | 99.4 | 58.55 | 752 | 704 | |
| 1963 54B | | 717 | US | 21 DEC | 99.3 | 58.54 | 743 | 706 | |
| 1963 54C | | 720 | US | 21 DEC | 101.1 | 58.49 | 923 | 696 | |
| 1963 54D | | 736 | US | 21 DEC | 97.7 | 58.55 | 715 | 580 | |
| 1964 LAUNCHES | | | | | | | | | |
| 1964 01A | GGSE EGRS 1 SOLAR RAD. | 727 | US | 11 JAN | 103.4 | 69.95 | 932 | 913 | 136.805 136.886 |
| 1964 01B | | 728 | US | 11 JAN | 103.4 | 69.93 | 939 | 906 | |
| 1964 01C | | 729 | US | 11 JAN | 103.4 | 69.93 | 938 | 907 | |
| 1964 01D | | 730 | US | 11 JAN | 103.5 | 69.93 | 935 | 910 | |
| 1964 01E | | 731 | US | 11 JAN | 103.5 | 69.93 | 935 | 911 | |
| 1964 02A | RELAY 2 | 733 | US | 19 JAN | 101.3 | 99.12 | 847 | 794 | 136.620\$136.142 |
| 1964 02B | | 734 | US | 19 JAN | 101.3 | 99.10 | 833 | 806 | |
| 1964 02C | | 735 | US | 19 JAN | 101.3 | 99.08 | 836 | 808 | |
| 1964 03A | | 737 | US | 21 JAN | 194.7 | 46.31 | 7416 | 2083 | |

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCLI- NATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|------------------------|------------------|-----------------------------|---------------|---------------|---------------------------|--------------------------|-----------------------|------------------------|--------------------------------------|
| 1964 LAUNCHES (CONT'D) | | | | | | | | | |
| 1964 03B | | 738 | US | 21 JAN | 194.8 | 46.30 | 7420 | 2085 | |
| 1964 04A | ECHO 2 | 740 | US | 25 JAN | 108.1 | 81.50 | 1311 | 971 | 136.019;136.170 |
| 1964 04B | | 741 | US | 25 JAN | 108.9 | 81.51 | 1310 | 1045 | |
| 1965 04C | | 742 | US | 25 JAN | 108.8 | 81.49 | 1308 | 1041 | |
| 1964 04D | | 743 | US | 25 JAN | 108.8 | 81.53 | 1311 | 1037 | |
| 1964 04E | | 749 | US | 25 JAN | 94.4 | 81.55 | 696 | 281 | |
| 1964 05A | SATURN 5 | 744 | US | 25 JAN | 92.0 | 31.44 | 492 | 245 | |
| 1964 06A | ELEKTRON 1 | 746 | USSR | 30 JAN | 169.3 | 60.96 | 7097 | 419 | |
| 1964 06B | ELEKTRON 2 | 748 | USSR | 30 JAN | 1356.3 | 58.52 | 66921 | 1501 | |
| 1964 06C | | 750 | USSR | 30 JAN | 167.9 | 60.92 | 7002 | 408 | |
| 1964 06D | | 751 | USSR | 30 JAN | 1384.1 | 58.54 | 67943 | 1581 | |
| 1964 11A | | 759 | US | 28 FEB | 94.5 | 82.05 | 510 | 486 | |
| 1964 15A | ARIEL 2 | 771 | US/UK | 27 MAR | 99.6 | 51.65 | 1197 | 283 | 136.557 |
| 1964 15B | | 775 | US | 27 MAR | 98.9 | 51.65 | 1127 | 280 | |
| 1964 15C | | 847 | US | 27 MAR | 103.2 | 51.36 | 1454 | 363 | |
| 1964 16D | | 785 | USSR | 2 APR | HELIOCENTRIC ORBIT | | | | |
| 1964 19B | POLYOT 2 | 784 | USSR | 12 APR | 91.3 | 58.09 | 386 | 289 | |
| 1964 26A | | 801 | US | 4 JUN | 103.1 | 90.50 | 946 | 864 | \$150\$400 |
| 1964 26B | | 805 | US | 4 JUN | 103.9 | 90.22 | 981 | 903 | |
| 1964 26C | | 806 | US | 4 JUN | 102.3 | 90.86 | 952 | 785 | |
| 1964 26D | | 809 | US | 4 JUN | 103.1 | 90.52 | 947 | 863 | |
| 1964 31A | | 812 | US | 18 JUN | 101.6 | 99.74 | 835 | 833 | |
| 1964 31B | | 813 | US | 18 JUN | 101.6 | 99.75 | 843 | 827 | |
| 1964 31C | | 815 | US | 18 JUN | 101.6 | 99.78 | 846 | 821 | |
| 1964 35A | | 824 | US | 2 JUL | 94.8 | 82.08 | 524 | 497 | |

OBJECTS IN ORBIT

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | PERIOD MINUTES | INCL- NATION | APOGEE Km. | PERIGEE Km. | TRANSMITTING FREQ. (MC/S) |
|------------------------|-------------|---------------------|--------|--------|---------------------------------|-----------------|---------------|----------------|------------------------------|
| 1964 LAUNCHES (CONT'D) | | | | | | | | | |
| 1964 38A | ELECKTRON 3 | 829 | USSR | 10 JUL | 168.1 | 60.85 | 7021 | 402 | |
| 1964 38B | ELECKTRON 4 | 830 | USSR | 10 JUL | 1313.8 | 59.17 | 65676 | 1038 | |
| 1964 38C | | 831 | USSR | 10 JUL | 168.4 | 60.85 | 7039 | 405 | |
| 1964 38D | | 832 | USSR | 10 JUL | 1341.3 | 59.23 | 66793 | 1025 | |
| 1964 40A | | 836 | US | 17 JUL | 6024.8 | 39.08 | 104101 | 102500 | |
| 1964 40B | | 837 | US | 17 JUL | 6004.3 | 40.75 | 114000 | 92103 | |
| 1964 40C | | 838 | US | 17 JUL | 2349.0 | 38.30 | 103983 | 319 | |
| 1964 41B | | 843 | US | 28 JUL | BARYCENTRIC ORBIT | | | | |
| 1964 45B | | 851 | US | 14 AUG | 126.4 | 95.67 | 3652 | 278 | \$136.470\$136.980 |
| 1964 47A | SYNCOM 3 | 858 | US | 19 AUG | 1436.2 | .10 | 35792 | 35784 | \$1820.177\$1815.794 |
| | | | | | | | | | \$1814.931 |
| 1964 47B | | 862 | US | 19 AUG | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| 1964 49D | COSMOS 41 | 869 | USSR | 22 AUG | 714.4 | 66.06 | 39330 | 790 | |
| 1964 49E | | 898 | USSR | 22 AUG | 718.3 | 65.23 | 39856 | 525 | |
| 1964 50A | COSMOS 42 | 864 | USSR | 22 AUG | 92.1 | 48.93 | 521 | 211 | |
| 1964 50C | COSMOS 43 | 867 | USSR | 22 AUG | 92.3 | 48.92 | 536 | 214 | |
| 1964 51A | EXPLORER 20 | 870 | US | 25 AUG | 103.9 | 79.92 | 1023 | 867 | \$136.326\$136.350 |
| | | | | | | | | | \$136.680 |
| 1964 51B | | 871 | US | 25 AUG | 103.9 | 79.92 | 1016 | 868 | |
| 1964 51C | | 873 | US | 25 AUG | 103.4 | 79.84 | 985 | 852 | |
| 1964 51D | | 874 | US | 25 AUG | 103.4 | 79.85 | 1038 | 802 | |
| 1964 51E | | 875 | US | 25 AUG | 103.4 | 79.84 | 1059 | 785 | |
| 1964 52A | NIMBUS 1 | 872 | US | 28 AUG | 98.3 | 98.69 | 927 | 428 | |
| 1964 52B | | 878 | US | 28 AUG | 98.3 | 98.69 | 930 | 427 | |

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCLIN- ATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|-------------------------------|------------------|-----------------------------|---------------|---------------|---------------------------|--------------------------|-----------------------|------------------------|--|
| <u>1964 LAUNCHES (CONT'D)</u> | | | | | | | | | |
| 1964 53A | COSMOS 44 | 876 | USSR | 28 AUG | 99.5 | 65.10 | 873 | 599 | |
| 1964 53B | | 877 | USSR | 28 AUG | 99.6 | 65.12 | 812 | 667 | |
| 1964 54A | OGO 1 | 879 | US | 5 SEP | 3841.9 | 40.72 | 144824 | 4930 | \$136.200\$400.250 \$400.850 136.147 |
| 1964 60A | EXPLORER 21 | 889 | US | 4 OCT | 2080.3 | 33.72 | 94288 | 917 | |
| 1964 63A | | 893 | US | 6 OCT | 106.3 | 89.92 | 1080 | 1035 | |
| 1964 63B | | 897 | US | 6 OCT | 106.6 | 89.89 | 1081 | 1059 | |
| 1964 63C | | 900 | US | 6 OCT | 106.6 | 89.91 | 1085 | 1053 | |
| 1964 63D | | 901 | US | 6 OCT | 106.6 | 89.92 | 1087 | 1056 | |
| 1964 63E | | 902 | US | 6 OCT | 106.6 | 89.92 | 1086 | 1056 | |
| 1964 63F | | 903 | US | 6 OCT | 106.6 | 89.93 | 1088 | 1055 | |
| 1964 64A | EXPLORER 22 | 899 | US | 10 OCT | 104.8 | 79.70 | 1079 | 890 | \$136.171\$162\$324 \$20\$40\$41\$360 |
| 1964 64B | | 907 | US | 10 OCT | 104.7 | 79.72 | 1080 | 888 | |
| 1964 64C | | 976 | US | 10 OCT | 104.1 | 79.29 | 1061 | 842 | |
| 1964 64D | | 977 | US | 10 OCT | 105.5 | 80.04 | 1026 | 912 | |
| 1964 72A | | 922 | US | 4 NOV | 94.9 | 82.06 | 525 | 508 | |
| 1964 72B | | 925 | US | 4 NOV | 94.8 | 82.05 | 519 | 500 | |
| 1964 72C | | 926 | US | 4 NOV | 94.2 | 82.07 | 488 | 477 | |
| 1964 72D | | 927 | US | 4 NOV | 94.3 | 82.04 | 489 | 479 | |
| 1964 73A | MARINER 3 | 923 | US | 5 NOV | HELIOCENTRIC ORBIT | | | | |
| 1964 74A | EXPLORER 13 | 924 | US | 6 NOV | 99.2 | 51.97 | 979 | 462 | \$136.078\$136.861 136.709 |
| 1964 76A | EXPLORER 14 | 931 | US | 21 NOV | 115.6 | 81.43 | 2381 | 589 | |
| 1964 76B | EXPLORER 25 | 932 | US | 21 NOV | 116.2 | 81.38 | 2493 | 530 | \$136.292\$126.860 |
| 1964 76C | | 933 | US | 21 NOV | 116.2 | 81.39 | 2496 | 530 | |
| 1964 76D | | 934 | US | 21 NOV | 116.4 | 81.38 | 2485 | 552 | |
| 1964 76E | | 935 | US | 21 NOV | 116.3 | 81.40 | 2488 | 538 | |

OBJECTS IN ORBIT

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | PERIOD MINUTES | INCLI- NATION | APOGEE Km. | PERIGEE Km. | TRANSMITTING FREQ. (MC/S) |
|------------------------|-------------|---------------------|--------|--------|--------------------|------------------|---------------|----------------|------------------------------|
| 1964 LAUNCHES (CONT'D) | | | | | | | | | |
| 1964 76F | | 936 | US | 21 NOV | 115.7 | 81.36 | 2391 | 582 | |
| 1964 76G | | 937 | US | 21 NOV | 116.1 | 81.40 | 2476 | 536 | |
| 1964 76H | | 939 | US | 21 NOV | 115.2 | 81.34 | 2351 | 584 | |
| 1964 76I | | 940 | US | 21 NOV | 116.1 | 81.39 | 2479 | 529 | |
| 1964 76J | | 941 | US | 21 NOV | 116.2 | 81.43 | 2522 | 502 | |
| 1964 76K | | 960 | US | 21 NOV | 116.4 | 81.38 | 2450 | 587 | |
| 1964 76L | | 1411 | US | 21 NOV | 116.3 | 81.40 | 2488 | 547 | |
| 1964 77A | MARINER 4 | 938 | US | 28 NOV | HELIOCENTRIC ORBIT | | | | |
| 1964 77B | | 942 | US | 28 NOV | HELIOCENTRIC ORBIT | | | | |
| 1964 78C | ZOND 2 | 945 | USSR | 30 NOV | HELIOCENTRIC ORBIT | | | | |
| 1964 80A | COSMOS 51 | 947 | USSR | 9 DEC | 89.6 | 48.73 | 286 | 217 | |
| 1964 83A | | 953 | US | 13 DEC | 106.0 | 89.99 | 1067 | 1019 | |
| 1964 83B | | 956 | US | 13 DEC | 106.3 | 90.00 | 1102 | 1011 | |
| 1964 83C | | 959 | US | 13 DEC | 106.3 | 89.98 | 1090 | 1025 | 136.650\$162\$324 |
| 1964 83D | | 965 | US | 13 DEC | 106.3 | 89.97 | 1089 | 1025 | \$150\$400 |
| 1964 83E | | 966 | US | 13 DEC | 106.3 | 89.98 | 1095 | 1019 | |
| 1964 83F | | 967 | US | 13 DEC | 106.3 | 89.98 | 1090 | 1023 | |
| 1964 83G | | 1099 | US | 13 DEC | 106.3 | 89.99 | 1086 | 1028 | |
| 1964 83H | | 1528 | US | 13 DEC | 106.3 | 89.98 | 1090 | 1024 | |
| 1964 83J | | 1608 | US | 13 DEC | 106.3 | 89.98 | 1087 | 1027 | |
| 1964 86A | EXPLORER 26 | 963 | US | 21 DEC | 453.1 | 19.93 | 26063 | 260 | 136.273 |
| 1965 LAUNCHES | | | | | | | | | |
| 1965 03A | | 973 | US | 19 JAN | 97.6 | 98.72 | 834 | 458 | |
| 1965 04A | TIROS 9 | 978 | US | 22 JAN | 119.2 | 96.39 | 2583 | 706 | \$136.234\$136.198 |
| 1965 04B | | 979 | US | 22 JAN | 119.3 | 96.41 | 2599 | 701 | |
| 1965 04C | | 1312 | US | 22 JAN | 118.0 | 96.25 | 2512 | 675 | |
| 1965 04D | | 1313 | US | 22 JAN | 120.4 | 96.37 | 2659 | 739 | |
| 1965 06A | COSMOS 53 | 983 | USSR | 30 JAN | 96.2 | 48.71 | 920 | 216 | |

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCL- INATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|------------------------|----------------------|-----------------------------|---------------|---------------|---------------------------|--------------------------|-----------------------|------------------------|--------------------------------------|
| 1965 LAUNCHES (CONT'D) | | | | | | | | | |
| 1965 06B | | 984 | USSR | 30 JAN | 93.6 | 48.74 | 646 | 220 | |
| 1965 07A | ORB. SOL. OBS. 2 | 987 | US | 3 FEB | 96.5 | 32.85 | 626 | 550 | 136.713 |
| 1965 07B | | 988 | US | 3 FEB | 96.5 | 32.85 | 635 | 547 | |
| 1965 08A | | 1000 | US | 11 FEB | 145.6 | 32.12 | 2797 | 2781 | |
| 1965 08B | | 1001 | US | 11 FEB | 145.4 | 32.13 | 2795 | 2761 | |
| 1965 08C | | 1002 | US | 11 FEB | 145.7 | 32.12 | 2808 | 2777 | |
| 1965 09A | PEGASUS 1 | 1085 | US | 16 FEB | 97.0 | 31.77 | 732 | 494 | \$136.410; 136.890 |
| 1965 09B | | 1088 | US | 16 FEB | 97.1 | 31.74 | 734 | 499 | |
| 1965 10B | | 1087 | US | 17 FEB | BARYCENTRIC ORBIT | | | | |
| 1965 11A | COSMOS 54 | 1089 | USSR | 21 FEB | 104.1 | 56.09 | 1644 | 256 | |
| 1965 11B | COSMOS 55 | 1090 | USSR | 21 FEB | 104.2 | 56.06 | 1656 | 254 | |
| 1965 11C | COSMOS 56 | 1091 | USSR | 21 FEB | 103.3 | 56.08 | 1558 | 263 | |
| 1965 11D | | 1092 | USSR | 21 FEB | 105.8 | 56.09 | 1783 | 276 | |
| 1965 11E | | 1094 | USSR | 21 FEB | 99.1 | 56.04 | 1161 | 253 | |
| 1965 14A | COSMOS 58 | 1097 | USSR | 26 FEB | 96.8 | 65.04 | 638 | 572 | |
| 1965 14B | | 1098 | USSR | 26 FEB | 96.9 | 65.06 | 693 | 526 | |
| 1965 16A | GREB | 1271 | US | 9 MAR | 103.5 | 70.09 | 941 | 910 | 136.766 |
| 1965 16B | GRAVITY GRADIENT II | 1244 | US | 9 MAR | 103.5 | 70.09 | 939 | 910 | 136.800 |
| 1965 16C | GRAVITY GRADIENT III | 1292 | US | 9 MAR | 103.5 | 70.08 | 941 | 909 | 136.840 |
| 1965 16D | SOLAR RAD. | 1291 | US | 9 MAR | 103.5 | 70.08 | 941 | 910 | |
| 1965 16E | EGRS III | 1208 | US | 9 MAR | 103.5 | 70.10 | 941 | 907 | |
| 1965 16F | OSCAR III | 1293 | US | 9 MAR | 103.5 | 70.11 | 949 | 900 | |
| 1965 16G | SURCAL | 1310 | US | 9 MAR | 103.5 | 70.12 | 944 | 902 | |
| 1965 16H | DODECAHEDRON | 1272 | US | 9 MAR | 103.5 | 70.10 | 941 | 908 | |
| 1965 16J | ROCKET BODY | 1245 | US | 9 MAR | 103.5 | 70.11 | 940 | 906 | |
| 1965 17B | EGRS II | 1250 | US | 11 MAR | 97.5 | 89.98 | 990 | 286 | |
| 1965 17C | | 1228 | US | 11 MAR | 97.2 | 89.98 | 968 | 287 | |
| 1965 17D | | 1248 | US | 11 MAR | 97.3 | 90.00 | 972 | 286 | |

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCLIN- NATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|------------------------|------------------|-----------------------------|---------------|---------------|---------------------------------|---------------------------|-----------------------|------------------------|--------------------------------------|
| 1965 LAUNCHES (CONT'D) | | | | | | | | | |
| 1965 17H | | 1323 | US | 11 MAR | 93.5 | 89.96 | 611 | 263 | |
| 1965 20A | COSMOS 61 | 1267 | USSR | 15 MAR | 104.1 | 56.03 | 1537 | 260 | |
| 1965 20B | COSMOS 62 | 1268 | USSR | 15 MAR | 104.1 | 56.04 | 1542 | 257 | |
| 1965 20C | COSMOS 63 | 1269 | USSR | 15 MAR | 103.3 | 56.04 | 1569 | 251 | |
| 1965 20D-20EB*** | | | USSR | 15 MAR | | | | | |
| 1965 21A | | 1273 | US | 18 MAR | 97.5 | 98.99 | 759 | 526 | |
| 1965 21C | | 1289 | US | 18 MAR | 97.5 | 99.00 | 761 | 524 | |
| 1965 21E | | 1376 | US | 18 MAR | 96.4 | 98.96 | 654 | 524 | |
| 1965 21F | | 1463 | US | 18 MAR | 98.6 | 99.01 | 862 | 527 | |
| 1965 23B | | 1298 | US | 21 MAR | BARYCENTRIC ORBIT | | | | |
| 1965 27A | | 1314 | US | 3 APR | 111.5 | 90.20 | 1320 | 1275 | |
| 1965 27B | EGRS IV | 1315 | US | 3 APR | 111.4 | 90.22 | 1321 | 1268 | |
| 1965 27C | | 1316 | US | 3 APR | 111.5 | 90.20 | 1324 | 1268 | |
| 1965 27D | | 1389 | US | 3 APR | 111.5 | 90.15 | 1320 | 1275 | |
| 1965 27E | | 1399 | US | 3 APR | 111.5 | 90.21 | 1312 | 1282 | |
| 1965 28A | EARLY BIRD | 1317 | US | 6 APR | 1437.3 | .13 | 36596 | 35025 | |
| 1965 28B | ROCKET BODY | 1318 | US | 6 APR | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| 1965 30A | MOLNIA 1 | 1324 | USSR | 23 APR | 720.4 | 65.34 | 39818 | 662 | |
| 1965 31B | | 1329 | US | 28 APR | 95.1 | 95.19 | 545 | 505 | |
| 1965 31G | | 1357 | US | 28 APR | 94.4 | 95.22 | 498 | 484 | |
| 1965 32A | EXPLORER 27 | 1328 | US | 29 APR | 107.8 | 41.17 | 1314 | 938 | \$137.740\$162\$324 |
| 1965 32B | | 1358 | US | 29 APR | 107.8 | 41.17 | 1314 | 936 | \$20\$40\$41\$360 |
| 1965 34A | | 1359 | US | 6 MAY | 157.0 | 32.13 | 3739 | 2784 | |
| 1965 34B | | 1360 | US | 6 MAY | 309.9 | 32.10 | 14797 | 2785 | |
| 1965 34C | | 1361 | US | 6 MAY | 145.6 | 32.13 | 2800 | 2775 | |
| 1965 38A | | 1377 | US | 20 MAY | 100.0 | 98.59 | 965 | 555 | |
| 1965 38B | | 1378 | US | 20 MAY | 100.0 | 98.58 | 963 | 558 | |
| 1965 38C | | 1379 | US | 20 MAY | 99.9 | 98.63 | 956 | 558 | |
| 1965 38D | | 1380 | US | 20 MAY | 99.1 | 98.78 | 893 | 534 | |
| 1965 38E | | 1461 | US | 20 MAY | 101.0 | 98.60 | 1052 | 560 | |
| 1965 38F | | 1462 | US | 20 MAY | 98.9 | 98.56 | 868 | 551 | |

OBJECTS IN ORBIT

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | PERIOD MINUTES | INCL- NATION | APOGEE Km. | PERIGEE Km. | TRANSMITTING FREQ. (MC/S) |
|------------------------|-------------|---------------------|--------|--------|--------------------|-----------------|---------------|----------------|------------------------------|
| 1965 LAUNCHES (CONT'D) | | | | | | | | | |
| 1965 38G | | 1475 | US | 20 MAY | 100.1 | 98.55 | 977 | 557 | |
| 1965 39A | PEGASUS 2 | 1381 | US | 25 MAY | 97.2 | 31.76 | 728 | 514 | \$136.410;136.889 |
| 1965 39B | ROCKET BODY | 1385 | US | 25 MAY | 97.2 | 31.76 | 739 | 508 | |
| 1965 42A | EXPLORER 28 | 1388 | US | 29 MAY | 8558.8 | 33.86 | 264247 | 196 | 136.125 |
| 1965 44A | LUNIK 6 | 1393 | USSR | 8 JUN | HELIOCENTRIC ORBIT | | | | |
| 1964 48A | | 1420 | US | 24 JUN | 106.9 | 89.98 | 1142 | 1028 | |
| 1965 48B | | 1425 | US | 24 JUN | 106.9 | 89.97 | 1136 | 1032 | |
| 1965 48C | | 1428 | US | 24 JUN | 106.6 | 89.98 | 1114 | 1026 | |
| 1965 48D | | 1435 | US | 24 JUN | 106.9 | 90.00 | 1144 | 1028 | |
| 1965 50A | | 1422 | US | 25 JUN | 94.6 | 107.65 | 508 | 496 | |
| 1965 50D | | 1427 | US | 25 JUN | 93.5 | 107.63 | 439 | 439 | |
| 1965 51A | TIROS 10 | 1430 | US | 2 JUL | 100.7 | 98.61 | 841 | 741 | \$136.232\$136.924 |
| 1965 51B | | 1433 | US | 2 JUL | 100.7 | 98.64 | 844 | 744 | |
| 1965 51C | | 1440 | US | 2 JUL | 99.3 | 98.51 | 842 | 614 | |
| 1965 51D | | 1529 | US | 2 JUL | 102.0 | 98.72 | 885 | 826 | |
| 1965 52A | COSMOS 70 | 1431 | USSR | 2 JUL | 97.6 | 48.76 | 1060 | 221 | |
| 1965 52B | | 1432 | USSR | 2 JUL | 96.9 | 48.80 | 985 | 233 | |
| 1965 53A | COSMOS 71 | 1441 | USSR | 16 JUL | 95.3 | 56.05 | 542 | 520 | |
| 1965 53B | COSMOS 72 | 1442 | USSR | 16 JUL | 95.9 | 56.06 | 582 | 544 | |
| 1965 53C | COSMOS 73 | 1443 | USSR | 16 JUL | 95.6 | 56.07 | 550 | 544 | |
| 1965 53D | COSMOS 74 | 1444 | USSR | 16 JUL | 96.2 | 56.04 | 612 | 543 | |
| 1965 53E | COSMOS 75 | 1445 | USSR | 16 JUL | 96.5 | 56.03 | 637 | 547 | |
| 1965 53F | | 1448 | USSR | 16 JUL | 96.6 | 56.12 | 642 | 548 | |
| 1965 53G | | 1449 | USSR | 16 JUL | 95.1 | 56.08 | 544 | 505 | |
| 1965 53H | | 1473 | USSR | 16 JUL | 96.7 | 56.06 | 655 | 546 | |
| 1965 55A | | 1447 | US | 17 JUL | 94.4 | 70.19 | 508 | 474 | |
| 1965 55B | | 1452 | US | 17 JUL | 94.1 | 70.18 | 492 | 459 | |
| 1965 55C | | 1455 | US | 17 JUL | 94.4 | 70.19 | 506 | 469 | |
| 1965 56A | ZOND 3 | 1454 | USSR | 18 JUL | HELIOCENTRIC ORBIT | | | | |
| 1965 58A | | 1458 | US | 20 JUL | 6679.0 | 35.20 | 115839 | 106367 | |
| 1965 58B | | 1459 | US | 20 JUL | 6712.7 | 34.22 | 121281 | 101715 | |

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCLI- NATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|------------------------|------------------|-----------------------------|---------------|---------------|---------------------------------|--------------------------|-----------------------|------------------------|--------------------------------------|
| 1965 LAUNCHES (CONT'D) | | | | | | | | | |
| 1965 58C | | 1460 | US | 20 JUL | 2610.6 | 34.39 | 112694 | 153 | 136.768 |
| 1965 59A | | 1464 | USSR | 23 JUL | 91.7 | 48.78 | 458 | 252 | |
| 1965 59B | | 1465 | USSR | 23 JUL | 91.0 | 48.77 | 388 | 248 | |
| 1965 60A | PEGASUS 3 | 1467 | US | 30 JUL | 95.2 | 28.87 | 534 | 514 | \$136.410;136.590 |
| 1965 60B | | 1468 | US | 30 JUL | 95.2 | 28.86 | 538 | 515 | |
| 1965 62B | | 1472 | US | 3 AUG | 94.7 | 107.36 | 507 | 505 | |
| 1965 63A | EGRS 5 | 1506 | US | 10 AUG | 122.2 | 69.25 | 2428 | 1134 | |
| 1965 63B | | 1502 | US | 10 AUG | 122.2 | 69.23 | 2425 | 1138 | |
| 1965 64A | CENTAUR 6 | 1503 | US | 11 AUG | CURRENT ELEMENTS NOT MAINTAINED | | | | |
| 1965 65A | | 1504 | US | 13 AUG | 107.4 | 90.02 | 1087 | 1066 | |
| 1965 65B | | 1508 | US | 13 AUG | 107.9 | 90.03 | 1169 | 1092 | |
| 1965 65C | | 1510 | US | 13 AUG | 108.1 | 90.04 | 1194 | 1084 | |
| 1965 65D | | 1511 | US | 13 AUG | 108.1 | 90.04 | 1196 | 1085 | |
| 1965 65E | | 1512 | US | 13 AUG | 108.1 | 90.06 | 1194 | 1087 | |
| 1965 65F | | 1514 | US | 13 AUG | 108.1 | 90.03 | 1200 | 1084 | |
| 1965 65G | | 1515 | US | 13 AUG | 108.1 | 90.01 | 1195 | 1082 | |
| 1965 65H | | 1520 | US | 13 AUG | 108.1 | 90.05 | 1201 | 1082 | |
| 1965 65J | | 1521 | US | 13 AUG | 108.1 | 90.02 | 1200 | 1080 | |
| 1965 65K | | 1522 | US | 13 AUG | 108.1 | 90.04 | 1201 | 1082 | |
| 1965 65L | | 1577 | US | 13 AUG | 108.1 | 90.03 | 1203 | 1080 | |
| 1965 70A | COSMOS 80 | 1570 | USSR | 3 SEP | 115.0 | 56.05 | 1550 | 1358 | |
| 1965 70B | COSMOS 81 | 1571 | USSR | 3 SEP | 115.3 | 56.05 | 1553 | 1388 | |
| 1965 70C | COSMOS 82 | 1572 | USSR | 3 SEP | 115.7 | 56.05 | 1561 | 1412 | |
| 1965 70D | COSMOS 83 | 1573 | USSR | 3 SEP | 116.1 | 56.05 | 1567 | 1440 | |
| 1965 70E | COSMOS 84 | 1574 | USSR | 3 SEP | 116.4 | 56.05 | 1573 | 1468 | |
| 1965 70F | | 1575 | USSR | 3 SEP | 114.6 | 65.19 | 1514 | 1360 | |
| 1965 72A | | 1580 | US | 10 SEP | 101.9 | 98.64 | 1055 | 649 | |
| 1965 72B | | 1581 | US | 10 SEP | 101.6 | 98.76 | 1003 | 669 | |
| 1965 72C | | 1582 | US | 10 SEP | 101.9 | 98.65 | 1051 | 646 | |
| 1965 72D | | 1583 | US | 10 SEP | 101.9 | 98.62 | 1052 | 652 | |
| 1965 73A | COSMOS 86 | 1584 | USSR | 18 SEP | 115.1 | 56.06 | 1639 | 1278 | |
| 1965 73B | COSMOS 87 | 1585 | USSR | 18 SEP | 115.5 | 56.06 | 1648 | 1305 | |

OBJECTS IN ORBIT

| <u>OBJECT</u> | <u>CODE NAME</u> | <u>CATALOGUE NUMBER</u> | <u>SOURCE</u> | <u>LAUNCH</u> | <u>PERIOD MINUTES</u> | <u>INCLI- NATION</u> | <u>APOGEE Km.</u> | <u>PERIGEE Km.</u> | <u>TRANSMITTING FREQ. (MC/S)</u> |
|-------------------------------|------------------|-----------------------------|---------------|---------------|---------------------------|--------------------------|-----------------------|------------------------|--------------------------------------|
| 1965 LAUNCHES (CONT'D) | | | | | | | | | |
| 1965 73C | COSMOS 88 | 1586 | USSR | 18 SEP | 115.8 | 56.07 | 1662 | 1326 | |
| 1965 73D | COSMOS 89 | 1587 | USSR | 18 SEP | 116.3 | 56.05 | 1675 | 1350 | |
| 1965 73E | COSMOS 90 | 1588 | USSR | 18 SEP | 116.7 | 56.05 | 1687 | 1375 | |
| 1965 73F | | 1589 | USSR | 18 SEP | 116.8 | 56.08 | 1692 | 1382 | |
| 1965 73G | | 1590 | USSR | 18 SEP | 116.5 | 56.10 | 1674 | 1374 | |
| 1965 73H | | 1591 | USSR | 18 SEP | 116.7 | 56.04 | 1692 | 1373 | |
| 1965 73J | | 1617 | USSR | 18 SEP | 117.5 | 56.16 | 1759 | 1380 | |
| 1965 73K | | 1618 | USSR | 18 SEP | 117.7 | 56.21 | 1768 | 1388 | |
| 1965 78A | | 1613 | US | 5 OCT | 125.7 | 144.31 | 3453 | 412 | |
| 1965 78B | | 1616 | US | 5 OCT | 125.7 | 144.30 | 3448 | 414 | |
| 1965 80A | MOLNIYA II | 1621 | USSR | 13 OCT | 719.0 | 65.07 | 39944 | 473 | |
| 1965 80B | | 1619 | USSR | 13 OCT | 90.5 | 64.84 | 407 | 144 | |
| 1965 80D | | 1623 | USSR | 13 OCT | 91.2 | 64.84 | 424 | 198 | |
| 1965 81A | OGO 2 | 1620 | US | 14 OCT | 104.4 | 87.37 | 1514 | 419 | \$136.200\$400.250 |
| 1965 81B | | 1625 | US | 14 OCT | 104.3 | 87.37 | 1509 | 418 | \$400.850 |
| 1965 82A | | 1624 | US | 15 OCT | 100.0 | 32.36 | 816 | 698 | |
| 1965 82B-82BP*** | | | US | 15 OCT | | | | | |
| 1965 84A | COSMOS 93 | 1629 | USSR | 19 OCT | 91.6 | 48.36 | 489 | 213 | |
| 1965 84B | | 1630 | USSR | 19 OCT | 91.6 | 48.36 | 449 | 208 | |
| 1965 85A | COSMOS 94 | 1636 | USSR | 28 OCT | 89.3 | 65.05 | 259 | 200 | |
| 1965 85B | | 1638 | USSR | 28 OCT | 89.1 | 64.97 | 258 | 206 | |
| 1965 86A | | 1637 | US | 28 OCT | 90.6 | 74.97 | 432 | 173 | |
| 1965 86B | | 1639 | US | 28 OCT | 89.6 | 74.98 | 401 | 134 | |

* APHELION PERIHELION IN ASTRONOMICAL UNITS, INCLINATION TO ECLIPTIC.
 ** TWO HUNDRED AND SIX METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED
 WITH 1961 OMICRON 1 and 1961 OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED
 CAN BE FOUND IN THE DECAYED OBJECTS LISTS.
 *** ONE HUNDRED AND TWENTY TWO OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED
 WITH 1965 20A, 1965 20B AND 1965 20C. OBJECTS OF THIS SERIES THAT HAVE DECAYED
 CAN BE FOUND IN THE DECAYED OBJECTS LIST.
 **** SIXTY ONE OBJECTS HAVE BEEN IDENTIFIED AS DEBRIS ASSOCIATED WITH 1965 82A.
 \$ TRANSMITTING ON COMMAND ONLY.
 & TRANSMITTING WHEN IN SUNLIGHT ONLY.
 # NO CATALOGUE NUMBER ASSIGNED.

DECAYED OBJECTS

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|---------------|--------------|---------------------|--------|--------|----------------|
| 1957 LAUNCHES | | | | | |
| ALPHA 1 | ROCKET BODY | 001 | USSR | 4 OCT | 1 DEC 57 |
| ALPHA 2 | SPUTNIK 1 | 002 | USSR | 4 OCT | EARLY JAN 58 |
| BETA 1 | SPUTNIK 2 | 003 | USSR | 3 NOV | 14 APR 58 |
| 1958 LAUNCHES | | | | | |
| GAMMA 1 | EXPLORER 3 | 006 | US | 26 MAR | 28 JUN 58 |
| DELTA 1 | ROCKET BODY | 007 | USSR | 15 MAY | 3 DEC 58 |
| DELTA 2 | SPUTNIK 3 | 008 | USSR | 15 MAY | 6 APR 60 |
| EPSILON 1 | EXPLORER 4 | 009 | US | 26 JUL | 23 OCT 59 |
| ZETA 1 | SCORE | 010 | US | 18 DEC | 21 JAN 59 |
| ETA 1 | PIONEER 1 | 110 | US | 11 OCT | 12 OCT 58 |
| THETA 1 | PIONEER 3 | 111 | US | 6 DEC | 7 DEC 58 |
| 1959 LAUNCHES | | | | | |
| BETA 1 | DISCOVERER 1 | 013 | US | 28 FEB | EARLY MAR 59 |
| GAMMA 1 | DISCOVERER 2 | 014 | US | 13 APR | 26 APR 59 |
| DELTA 1 | EXPLORER 6 | 015 | US | 7 AUG | PRIOR JUL 61 |
| DELTA 2 | ROCKET BODY | 017 | US | 7 AUG | PRIOR JUL 61 |
| EPSILON 1 | DISCOVERER 5 | 018 | US | 13 AUG | 28 SEP 59 |
| EPSILON 2 | CAPSULE | 026 | US | 13 AUG | 11 FEB 61 |
| ZETA 1 | DISCOVERER 6 | 019 | US | 19 AUG | 20 OCT 59 |
| THETA 1 | LUNIK 3 | 021 | USSR | 4 OCT | MAR 60 |
| KAPPA 1 | DISCOVERER 7 | 024 | US | 7 NOV | 26 NOV 59 |
| LAMBDA 1 | DISCOVERER 8 | 025 | US | 20 NOV | 8 MAR 60 |
| XI 1 | LUNIK 2 | 114 | USSR | 12 SEP | 13 SEP 59***** |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|---------------|---------------|---------------------|--------|--------|--------------|
| 1960 LAUNCHES | | | | | |
| GAMMA 1 | ROCKET BODY | 030 | US | 13 APR | 18 AUG 60 |
| GAMMA 3 | METAL OBJECT | 033 | US | 13 APR | JUL 60 |
| DELTA 1 | DISCOVERER II | 032 | US | 15 APR | 26 APR 60 |
| EPSILON 1 | SPUTNIK 4 | 034 | USSR | 15 MAY | 5 SEP 62 |
| EPSILON 2 | ROCKET BODY | 035 | USSR | 15 MAY | 17 JUL 60 |
| EPSILON 3 | NONE | 036 | USSR | 15 MAY | 15 OCT 65 |
| EPSILON 4 | NONE | 037 | USSR | 15 MAY | PRIOR JUL 61 |
| EPSILON 5 | NONE | 038 | USSR | 15 MAY | SEP-OCT 60 |
| EPSILON 6 | NONE | 039 | USSR | 15 MAY | 24 SEP 60 |
| EPSILON 7 | NONE | 040 | USSR | 15 MAY | 24 SEP 60 |
| EPSILON 8 | NONE | 041 | USSR | 15 MAY | SEP-OCT 60 |
| EPSILON 9 | NONE | 042 | USSR | 15 MAY | SEP-OCT 60 |
| ZETA 2 | METAL OBJECT | 044 | US | 24 MAY | 5 DEC 60 |
| THETA 1 | DISCOVERER 13 | 048 | US | 10 AUG | 14 NOV 60 |
| THETA 1# | CAPSULE | NNA | US | 10 AUG | 11 AUG 60** |
| KAPPA 1 | DISCOVERER 14 | 054 | US | 18 AUG | 16 SEP 60 |
| KAPPA 1# | CAPSULE | NNA | US | 18 AUG | 19 AUG 60** |
| LAMBDA 1 | SPUTNIK 5 | 055 | USSR | 19 AUG | 20 AUG 60* |
| LAMBDA 2 | ROCKET BODY | 056 | USSR | 19 AUG | 23 SEP 60 |
| MU 1 | DISCOVERER 15 | 057 | US | 13 SEP | 18 OCT 60 |
| MU 1# | CAPSULE | NNA | US | 13 SEP | 15 SEP 60*** |
| OMICRON 1 | DISCOVERER 17 | 061 | US | 12 NOV | 29 DEC 60 |
| OMICRON 1# | CAPSULE | NNA | US | 12 NOV | 14 NOV 60 |
| RHO 1 | SPUTNIK 6 | 065 | USSR | 1 DEC | 2 DEC 60 |
| RHO 2 | ROCKET BODY | 066 | USSR | 1 DEC | 2 DEC 60 |
| SIGMA 1# | CAPSULE | NNA | US | 7 DEC | 10 DEC 60** |
| SIGMA 1 | DISCOVERER 18 | 067 | US | 7 DEC | 2 APR 61 |
| TAU 1 | DISCOVERER 19 | 068 | US | 20 DEC | 23 JAN 61 |

DECAYED OBJECTS

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|---------------|--------------------|---------------------|--------|--------|-----------------|
| 1961 LAUNCHES | | | | | |
| BETA 1 | SPUTNIK 7 | 071 | USSR | 4 FEB | 26 FEB 61 |
| BETA 2 | ROCKET BODY | 072 | USSR | 4 FEB | 12-13 FEB 61 |
| BETA 3 | NONE | 073 | USSR | 4 FEB | 17 MAR 61 |
| GAMMA 2 | ROCKET BODY | 076 | USSR | 12 FEB | 18 FEB 61 |
| GAMMA 3 | SPUTNIK 8 | 077 | USSR | 12 FEB | 24 FEB 61 |
| GAMMA 4 | NONE | 078 | USSR | 12 FEB | 13-18 FEB 61 |
| DELTA 1 | EXPLORER 9 | 081 | US | 16 FEB | 9 APR 64 |
| DELTA 4 | NONE | 086 | US | 16 FEB | PRIOR JUL 61 |
| EPSILON 1 | DISCOVERER 20 | 083 | US | 17 FEB | 28 JUL 62 |
| EPSILON 2 | NONE | 088 | US | 17 FEB | 30 MAR-2 APR 61 |
| EPSILON 3 | NONE | 089 | US | 17 FEB | 20 APR 61 |
| EPSILON 4 | NONE | 090 | US | 17 FEB | 31 OCT 61 |
| ZETA 1 | DISCOVERER 21 | 084 | US | 18 FEB | 20 APR 62 |
| ETA 1 | TRANSIT 3B & LOFTI | 087 | US | 22 FEB | 30 MAR 61 |
| THETA 1 | SPUTNIK 9 | 091 | USSR | 9 MAR | 9 MAR 61 * |
| THETA 2 | NONE | 092 | USSR | 9 MAR | 10 MAR 61 |
| THETA 3 | NONE | 093 | USSR | 9 MAR | 10 MAR 61 |
| THETA 4 | NONE | 094 | USSR | 9 MAR | 10 MAR 61 |
| IOTA 1 | SPUTNIK 10 | 095 | USSR | 25 MAR | 25 MAR 61 |
| ITOA 2 | ROCKET BODY | 096 | USSR | 25 MAR | 26 MAR 61 |
| IOTA 3 | NONE | 097 | USSR | 25 MAR | 26 MAR 61 |
| LAMBDA 1 | DISCOVERER 23 | 100 | US | 8 APR | 16 APR 62 |
| LAMBDA 2 | CAPSULE | 102 | US | 8 APR | 23 MAY 62 |
| LAMBDA 3 | NONE | 106 | US | 8 APR | 10 SEF 61 |
| MU 1 | VOSTOK 1 | 103 | USSR | 12 APR | 12 APR 61 **** |
| MU 2 | ROCKET BODY | 104 | USSR | 12 APR | 16 APR 61 |
| XI 1# | CAPSULE | NNA | US | 16 JUN | 18 JUN 61 ** |
| XI 1 | DISCOVERER 25 | 108 | US | 16 JUN | 12 JUL 61 |
| XI 2 | NONE | 109 | US | 16 JUN | 19 JUN 61 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|---------------|---------------------|--------|--------|----------------|
| 1961 LAUNCHES (CONT'D) | | | | | |
| OMICRON 12 | METAL OBJECT | 359 | US | 29 JUN | 31 AUG 65 |
| OMICRON 25 | METAL OBJECT | 140 | US | 29 JUN | 30 SEP 62 |
| OMICRON 28 | METAL OBJECT | 143 | US | 29 JUN | 16 JUN 62 |
| OMICRON 46 | METAL OBJECT | 171 | US | 29 JUN | 29 JAN 62 |
| OMICRON 62 | METAL OBJECT | 231 | US | 29 JUN | 13 FEB 65 |
| PI 1 | DISCOVERER 26 | 160 | US | 7 JUL | 5 DEC 61 |
| PI 1# | CAPSULE | NNA | US | 8 JUL | 9 JUL 61 ** |
| SIGMA 2 | METAL OBJECT | 164 | US | 12 JUL | 24 JUL 61 |
| TAU 1 | VOSTOK 2 | 168 | USSR | 6 AUG | 7 AUG 61 ***** |
| TAU 2 | ROCKET BODY | 169 | USSR | 6 AUG | 9 AUG 61 |
| PHI 1 | RANGER 1 | 173 | US | 23 AUG | 30 AUG 61 |
| PHI 2 | ROCKET BODY | 174 | US | 23 AUG | 3 SEP 61 |
| CHI 1 | EXPLORER 13 | 180 | US | 25 AUG | 28 AUG 61 |
| PSI 1 | DISCOVERER 29 | 181 | US | 30 AUG | 10 SEP 61 |
| PSI 1# | CAPSULE | NNA | US | 30 AUG | 4 SEP 61 |
| OMEGA 1 | DISCOVERER 30 | 182 | US | 12 SEP | 11 DEC 61 |
| OMEGA 1# | CAPSULE | NNA | US | 12 SEP | 15 SEP 61 ** |
| OMEGA 2 | METAL OBJECT | 185 | US | 12 SEP | 18 SEP 61 |
| OMEGA 3 | METAL OBJECT | 187 | US | 12 SEP | 28 SEP 61 |
| A-ALPHA 1 | MA-4 | 183 | US | 13 SEP | 13 SEP 61 ** |
| A-ALPHA 2 | ROCKET BODY | 184 | US | 13 SEP | 13 SEP 61 |
| A-BETA 1 | DISCOVERER 31 | 186 | US | 17 SEP | 26 OCT 61 |
| A-GAMMA 1 | DISCOVERER 32 | 189 | US | 13 OCT | 13 NOV 61 |
| A-GAMMA 1 | CAPSULE | NNA | US | 13 OCT | 14 OCT 61 ** |
| A-GAMMA 2 | METAL OBJECT | 190 | US | 13 OCT | 25 OCT 61 ** |
| A-GAMMA 3 | METAL OBJECT | 191 | US | 13 OCT | 16 OCT 61 |
| A-DELTA 2 | | 193 | US | 21 OCT | 5 DEC 61 |
| A-EPSILON 1 | DISCOVERER 34 | 197 | US | 5 NOV | 7 DEC 62 |
| A-EPSILON 2 | METAL OBJECT | 198 | US | 5 NOV | 30 NOV 61 |
| A-EPSILON 3 | METAL OBJECT | 199 | US | 5 NOV | 9 DEC 61 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|---------------------------|---------------|---------------------|--------|--------|-----------------|
| 1961 LAUNCHES (CONTINUED) | | | | | |
| A-EPSILON 4 | METAL OBJECT | 200 | US | 5 NOV | 10 DEC 61 |
| A-EPSILON 5 | METAL OBJECT | 203 | US | 5 NOV | 12 DEC 61 |
| A-ZETA 1 | DISCOVERER 35 | 201 | US | 15 NOV | 3 DEC 61 |
| A-ZETA 1# | CAPSULE | NNA | US | 15 NOV | 16 NOV 61 ** |
| A-ZETA 2 | METAL OBJECT | 207 | US | 15 NOV | 23 NOV 61 |
| A-THETA 1 | RANGER 2 | 206 | US | 18 NOV | 20 NOV 61 |
| A-IOTA 1 | MA-5 | 208 | US | 29 NOV | 29 NOV 61 ** |
| A-IOTA 2 | ROCKET BODY | 209 | US | 29 NOV | 30 NOV 61 |
| A-KAPPA 1 | DISCOVERER 36 | 213 | US | 12 DEC | 8 MAR 62 |
| A-KAPPA 1# | CAPSULE | NNA | US | 12 DEC | 16 DEC 61 ** |
| A-KAPPA 2 | OSCAR 1 | 214 | US | 12 DEC | 31 JAN 62 |
| A-KAPPA 3 | METAL OBJECT | 215 | US | 12 DEC | 19 DEC 61 |
| A-LAMBDA 1 | | 217 | US | 22 DEC | 14 AUG 62 |
| A-LAMBDA 2 | | 218 | US | 22 DEC | 31 DEC 61 |
| A-LAMBDA 3 | | 219 | US | 22 DEC | 9 JAN 62 |
| 1962 LAUNCHES | | | | | |
| GAMMA 1 | FRIENDSHIP 7 | 240 | US | 20 FEB | 20 FEB 62 ***** |
| GAMMA 2 | ROCKET BODY | 241 | US | 20 FEB | 21 FEB 62 |
| DELTA 1 | | 242 | US | 21 FEB | 4 MAR 62 |
| EPSILON 1 | DISCOVERER 38 | 247 | US | 27 FEB | 21 MAR 62 |
| EPSILON 1# | CAPSULE | NNA | US | 27 FEB | 3 MAR 62 ** |
| EPSILON 2 | ROCKET BODY | 248 | US | 27 FEB | 3 MAR 62 |
| EPSILON 3 | METAL OBJECT | 249 | US | 27 FEB | 3 MAR 62 |
| EPSILON 4 | METAL OBJECT | 251 | US | 27 FEB | 7 MAR 62 |
| ETA 1 | | 256 | US | 7 MAR | 7 JUN 63 |
| ETA 2 | | 258 | US | 7 MAR | 31 MAR 62 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|--------------|---------------------|--------|--------|-----------------|
| 1962 LAUNCHES (CONT'D) | | | | | |
| ETA 3 | | 259 | US | 7 MAR | 3 NOV 62 |
| THETA 1 | COSMOS 1 | 266 | USSR | 16 MAR | 25 MAY 62 |
| THETA 2 | ROCKET BODY | 267 | USSR | 16 MAR | 18 JUN 62 |
| IOTA 1 | COSMOS 2 | 269 | USSR | 6 APR | 19-20 AUG 63 |
| IOTA 2 | ROCKET BODY | 270 | USSR | 6 APR | 6 OCT 62 |
| KAPPA 2 | | 272 | US | 9 APR | 4 MAY 62 |
| LAMBDA 1 | | 276 | US | 18 APR | 28 MAY 62 |
| LAMBDA 2 | | 277 | US | 18 APR | 20 APR 62 |
| LAMBDA 3 | | 278 | US | 18 APR | 21 APR 62 |
| LAMBDA 4 | | 279 | US | 18 APR | 21 APR 62 |
| MU 1 | RANGER 4 | 280 | US | 23 APR | 26 APR 62 ***** |
| NU 1 | COSMOS 3 | 281 | USSR | 24 APR | 17 OCT 62 |
| NU 2 | ROCKET BODY | 283 | USSR | 24 APR | 5 AUG 62 |
| XI 1 | COSMOS 4 | 287 | USSR | 26 APR | 29 APR 62 |
| XI 2 | ROCKET BODY | 284 | USSR | 26 APR | 17 JUN 62 |
| XI 3 | METAL OBJECT | 289 | USSR | 26 APR | 3 MAY 62 |
| PI 1 | | 286 | US | 26 APR | 28 APR 62 |
| RHO 1 | | 290 | US | 29 APR | 26 MAY 62 |
| RHO 2 | | 291 | US | 29 APR | 1 MAY 62 |
| SIGMA 1 | | 292 | US | 15 MAY | 26 NOV 63 |
| SIGMA 2 | | 293 | US | 15 MAY | 3 JUL 62 |
| SIGMA 3 | | 294 | US | 15 MAY | 13 JUL 62 |
| TAU 1 | AURORA 7 | 295 | US | 24 MAY | 24 MAY 62 ***** |
| TAU 2 | ROCKET BODY | 296 | US | 24 MAY | 25 MAY 62 |
| UPSILON 1 | COSMOS 5 | 297 | USSR | 28 MAY | 2 MAY 63 |
| UPSILON 2 | ROCKET BODY | 298 | USSR | 28 MAY | 15 DEC 62 |
| PHI 1 | | 302 | US | 30 MAY | 11 JUN 62 |
| PHI 2 | | 303 | US | 30 MAY | 2 JUN 62 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|--------------|---------------------|--------|--------|----------------|
| 1962 LAUNCHES (CONT'D) | | | | | |
| CHI 1 | | 304 | US | 2 JUN | 28 JUN 62 |
| CHI 2 | OSCAR 2 | 305 | US | 2 JUN | 21 JUN 62 |
| CHI 3 | | 306 | US | 2 JUN | 6 JUN 62 |
| PSI 1 | | 307 | US | 17 JUN | 18 JUN 62 |
| OMEGA 1 | | 308 | US | 18 JUN | 29-30 OCT 63 |
| OMEGA 2 | | 310 | US | 18 JUN | 12 JUL 62 |
| OMEGA 3 | | 314 | US | 18 JUN | 14 JUL 62 |
| A-BETA 1 | | 315 | US | 23 JUN | 7 JUL 62 |
| A-GAMMA 1 | | 316 | US | 28 JUN | 14 SEP 62 |
| A-DELTA 1 | COSMOS 6 | 338 | USSR | 30 JUN | 8 AUG 62 |
| A-DELTA 2 | ROCKET BODY | 339 | USSR | 30 JUN | 8 SEP 62 |
| A-ZETA 1 | | 342 | US | 18 JUL | 25 JUL 62 |
| A-ZETA 2 | | 343 | US | 18 JUL | 27 JUL 62 |
| A-ETA 1 | | 344 | US | 21 JUL | 14 AUG 62 |
| A-THETA 1 | | 345 | US | 28 JUL | 24 AUG 62 |
| A-IOTA 1 | COSMOS 7 | 346 | USSR | 28 JUL | 1 AUG 62 |
| A-IOTA 2 | ROCKET BODY | 347 | USSR | 28 JUL | 21 AUG 62 |
| A-IOTA 3 | METAL OBJECT | 348 | USSR | 28 JUL | 31 JUL 62 |
| A-IOTA 4 | METAL OBJECT | 349 | USSR | 28 JUL | 30 JUL 62 |
| A-KAPPA 1 | | 360 | US | 2 AUG | 26 AUG 62 |
| A-KAPPA 2 | | 362 | US | 2 AUG | 8 AUG 62 |
| A-LAMBDA 1 | | 361 | US | 5 AUG | 6 AUG 62 |
| A-MU 1 | VOSTOK 3 | 363 | USSR | 11 AUG | 15 AUG 62 **** |
| A-MU 2 | ROCKET BODY | 364 | USSR | 11 AUG | 14 AUG 62 |
| A-NU 1 | VOSTOK 4 | 365 | USSR | 12 AUG | 15 AUG 62 **** |
| A-NU 2 | ROCKET BODY | 366 | USSR | 12 AUG | 14 AUG 62 |
| A-XI 1 | COSMOS 8 | 367 | USSR | 18 AUG | 17 AUG 63 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-------------|---------------------|--------|--------|----------------|
| 1962 LAUNCHES (CONT'D) | | | | | |
| A-OMEGA 7 | | 431 | USSR | 27 SEP | 3 OCT 62 |
| A-OMEGA 8 | | 435 | USSR | 27 SEP | 6 OCT 62 |
| B-BETA 1 | | 427 | US | 29 SEP | 14 OCT 62 |
| B-DELTA 1 | SIGMA 7 | 433 | US | 3 OCT | 3 OCT 62 ***** |
| B-DELTA 2 | ROCKET BODY | 434 | US | 3 OCT | 4 OCT 62 |
| B-EPSILON 1 | | 436 | US | 9 OCT | 16 NOV 62 |
| B-ZETA 1 | | 437 | USSR | 17 OCT | 21 OCT 62 |
| B-ZETA 2 | | 438 | USSR | 17 OCT | 5 NOV 62 |
| B-THETA 1 | | 441 | USSR | 20 OCT | 18 MAY 64 |
| B-THETA 2 | | 442 | USSR | 20 OCT | 5 JUN 63 |
| B-IOTA 1 | | 443 | USSR | 24 OCT | 29 OCT 62 |
| B-IOTA 2 | | 456 | USSR | 24 OCT | 22 DEC 62 |
| B-IOTA 3 | | 457 | USSR | 24 OCT | 26 FEB 63 |
| B-IOTA 4 | | 458 | USSR | 24 OCT | 29 NOV 62 |
| B-IOTA 5 | | 459 | USSR | 24 OCT | 24 DEC 62 |
| B-IOTA 6 | | 460 | USSR | 24 OCT | 8 DEC 62 |
| B-IOTA 7 | | 482 | USSR | 24 OCT | 10 DEC 62 |
| B-IOTA 8 | | 483 | USSR | 24 OCT | 2 JAN 63 |
| B-IOTA 9 | | 484 | USSR | 24 OCT | 4 DEC 62 |
| B-IOTA 10 | | 485 | USSR | 24 OCT | 10 DEC 62 |
| B-IOTA 11 | | 486 | USSR | 24 OCT | 30 NOV 62 |
| B-IOTA 12 | | 487 | USSR | 24 OCT | 1 DEC 62 |
| B-IOTA 13 | | 491 | USSR | 24 OCT | 25 DEC 62 |
| B-IOTA 14 | | 492 | USSR | 24 OCT | 15 DEC 62 |
| B-IOTA 15 | | 493 | USSR | 24 OCT | 21 DEC 62 |
| B-IOTA 16 | | 494 | USSR | 24 OCT | 17 DEC 62 |
| B-IOTA 17 | | 495 | USSR | 24 OCT | 26 DEC 62 |
| B-IOTA 18 | | 496 | USSR | 24 OCT | 23 DEC 62 |
| B-IOTA 19 | | 497 | USSR | 24 OCT | 26 DEC 62 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-------------|---------------------|--------|--------|----------------|
| 1962 LAUNCHES (CONT'D) | | | | | |
| A XI 2 | ROCKET BODY | 368 | USSR | 18 AUG | 19 DEC 62 |
| A PI 1 | | 371 | USSR | 25 AUG | 28 AUG 62 |
| A PI 2 | | 372 | USSR | 25 AUG | 2 SEP 62 |
| A PI 3 | | 373 | USSR | 25 AUG | 31 AUG 62 |
| A PI 4 | | 379 | USSR | 25 AUG | 5 SEP 62 |
| A PI 5 | | 380 | USSR | 25 AUG | 30 AUG 62 |
| A PI 6 | | 376 | USSR | 25 AUG | 6 SEP 62 |
| A PI 7 | | 386 | USSR | 25 AUG | 8 SEP 62 |
| A PI 8 | | 387 | USSR | 25 AUG | 5 SEP 62 |
| A SIGMA 1 | | 377 | US | 29 AUG | 10 SEP 62 |
| A TAU 1 | | 381 | USSR | 1 SEP | 6 SEP 62 |
| A TAU 2 | | 382 | USSR | 1 SEP | 3 SEP 62 |
| A TAU 3 | | 383 | USSR | 1 SEP | 3 SEP-1 OCT 62 |
| A TAU 4 | | 384 | USSR | 1 SEP | 21 SEP 62 |
| A UPSILON 1 | | 385 | US | 1 SEP | 26 OCT 64 |
| A PHI 1 | | 389 | USSR | 12 SEP | 14 SEP 62 |
| A PHI 2 | | 390 | USSR | 12 SEP | 12 SEP 62 |
| A PHI 3 | | 391 | USSR | 12 SEP | 17 SEP 62 |
| A PHI 4 | | 392 | USSR | 12 SEP | 13 SEP 62 |
| A PHI 5 | | 393 | USSR | 12 SEP | 13 SEP 62 |
| A PHI 6 | | 394 | USSR | 12 SEP | 16 SEP 62 |
| A PHI 7 | | 395 | USSR | 12 SEP | 15 SEP 62 |
| A CHI 1 | | 396 | US | 17 SEP | 16 NOV 62 |
| A OMEGA 1 | | 422 | USSR | 27 SEP | 1 OCT 62 |
| A OMEGA 2 | | 423 | USSR | 27 SEP | 22 DEC 62 |
| A OMEGA 3 | | 425 | USSR | 27 SEP | 6 OCT 62 |
| A OMEGA 4 | | 428 | USSR | 27 SEP | 8 OCT 62 |
| A OMEGA 5 | | 429 | USSR | 27 SEP | 4 OCT 62 |
| A OMEGA 6 | | 430 | USSR | 27 SEP | 8 OCT 62 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|------------|
| 1962 LAUNCHES (CONT'D) | | | | | |
| B-IOTA 20 | | 498 | USSR | 24 OCT | 10 DEC 62 |
| B-IOTA 21 | | 499 | USSR | 24 OCT | 9 DEC 62 |
| B-IOTA 22 | | 500 | USSR | 24 OCT | 28 DEC 62 |
| B-IOTA 23 | | 501 | USSR | 24 OCT | 26 DEC 62 |
| B-IOTA 24 | | 512 | USSR | 24 OCT | 31 DEC 62 |
| B-NU 1 | | 448 | USSR | 1 NOV | 2-3 NOV 62 |
| B-NU 2 | | 449 | USSR | 1 NOV | 3 NOV 62 |
| B-XI 1 | | 451 | USSR | 4 NOV | 5 NOV 62 |
| B-XI 2 | | 452 | USSR | 4 NOV | 8 NOV 62 |
| B-XI 3 | | 454 | USSR | 4 NOV | 19 JAN 63 |
| B-XI 4 | | 488 | USSR | 4 NOV | 25 DEC 62 |
| B-XI 5 | | 489 | USSR | 4 NOV | 27 DEC 62 |
| B-OMICRON 1 | | 453 | US | 5 NOV | 3 DEC 62 |
| B-PI 1 | | 455 | US | 11 NOV | 12 DEC 62 |
| B-RHO 1 | | 481 | US | 24 NOV | 13 DEC 62 |
| B-SIGMA 1 | | 490 | US | 4 DEC | 8 DEC 62 |
| B-TAU 3 | | 507 | US | 13 DEC | 1 JUL 63 |
| B-PHI 1 | | 505 | US | 14 DEC | 8 JAN 63 |
| B-OMEGA 1 | | 517 | USSR | 22 DEC | 30 DEC 62 |
| B-OMEGA 2 | | 518 | USSR | 22 DEC | 22 JAN 63 |
| 1963 LAUNCHES | | | | | |
| 1963 01A | | 521 | USSR | 4 JAN | 5 JAN 63 |
| 1963 01B | | 522 | USSR | 4 JAN | 11 JAN 63 |
| 1963 01C | | 524 | USSR | 4 JAN | 11 JAN 63 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-------------|---------------------|--------|--------|-----------------|
| 1963 LAUNCHES (CONT'D) | | | | | |
| 1963 02A | | 525 | US | 7 JAN | 24 JAN 63 |
| 1963 02B | | 526 | US | 7 JAN | 16 JAN 63 |
| 1963 03B | | 528 | US | 16 JAN | 8 NOV 63 |
| 1963 03C | | 529 | US | 16 JAN | 31 DEC 63 |
| 1963 06A | | 554 | USSR | 21 MAR | 29 MAR 63 |
| 1963 06B | | 555 | USSR | 21 MAR | 9 APR 63 |
| 1963 07A | | 562 | US | 1 APR | 26 APR 63 |
| 1963 08A | | 563 | USSR | 2 APR | 3 APR 63 |
| 1963 09B | | 565 | US | 3 APR | 24 NOV 63 |
| 1963 10A | | 567 | USSR | 13 APR | 29 AUG 63 |
| 1963 10B | | 568 | USSR | 13 APR | 6 JUL 63 |
| 1963 11A | | 569 | USSR | 22 APR | 27 APR 63 |
| 1963 11B | | 570 | USSR | 22 APR | 1 MAY 63 |
| 1963 12A | | 571 | USSR | 28 APR | 8 MAY 63 |
| 1963 12B | | 572 | USSR | 28 APR | 20 MAY 63 |
| 1963 15A | | 576 | US | 15 MAY | 16 MAY 63 ***** |
| 1963 15B | | 577 | US | 15 MAY | 16 MAY 63 |
| 1963 16A | | 578 | US | 18 MAY | 27 MAY 63 |
| 1963 17A | | 580 | USSR | 22 MAY | 2 JUN 65 |
| 1963 17B | | 581 | USSR | 22 MAY | 26 AUG 63 |
| 1963 17C | | 582 | USSR | 22 MAY | 12 MAY 65 |
| 1963 17D | | 583 | USSR | 22 MAY | 30 AUG 63 |
| 1963 17E | | 584 | USSR | 22 MAY | 25 JUL 63 |
| 1963 17F | | 585 | USSR | 22 MAY | 30 SEP 63 |
| 1963 17G | | 588 | USSR | 22 MAY | 2 APR 64 |
| 1963 18A | | 586 | USSR | 24 MAY | 2 JUN 63 |
| 1963 18B | | 587 | USSR | 24 MAY | 8 JUN 63 |
| 1963 19A | | 590 | US | 12 JUN | 12 JUN 63 |
| 1963 20A | VOSTOK 5 | 591 | USSR | 14 JUN | 19 JUN 63 **** |
| | ROCKET BODY | | | | |
| | FAITH 7 | | | | |
| | ROCKET BODY | | | | |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------------|---------------------|--------|--------|---------------|
| 1963 LAUNCHES (CONT'D) | | | | | |
| 1963 20B | | 592 | USSR | 14 JUN | 16 JUN 63 |
| 1963 21A | | 593 | US | 15 JUN | 7 AUG 63 |
| 1963 21B | LOFTI 2A | 601 | US | 15 JUN | 18 JUL 63 |
| 1963 21C | SOLAR RADIATION | 599 | US | 15 JUN | 1 AUG 63 |
| 1963 21D | | 600 | US | 15 JUN | 30 JUL 63 |
| 1963 21E | | 598 | US | 15 JUN | 27 JUL 63 |
| 1963 21F | | 597 | US | 15 JUN | 5 JUL 63 |
| 1963 21G | | 617 | US | 15 JUN | 3 JUL 63 |
| 1963 23A | VOSTOK 6 | 595 | USSR | 16 JUN | 19 JUN 63**** |
| 1963 23B | | 596 | USSR | 16 JUN | 18 JUN 63 |
| 1963 25A | | 609 | US | 27 JUN | 26 JUL 63 |
| 1963 27B | | 615 | US | 29 JUN | 14-15 NOV 64 |
| 1963 27C | | 616 | US | 29 JUN | 10 JUL 63 |
| 1963 28A | | 618 | US | 12 JUL | 18 JUL 63 |
| 1963 28B | | 619 | US | 12 JUL | 13 JUL 63 |
| 1963 28C | | 620 | US | 12 JUL | 16 JUL 63 |
| 1963 29A | | 621 | US | 18 JUL | 13 AUG 63 |
| 1963 29B | | 623 | US | 18 JUL | 29 JUL 63 |
| 1963 32A | | 626 | US | 31 JUL | 11 AUG 63 |
| 1963 32B | | 627 | US | 31 JUL | 10 AUG 63 |
| 1963 33A | | 632 | USSR | 6 AUG | 30 MAR 64 |
| 1963 33B | | 633 | USSR | 6 AUG | 8-9 DEC 63 |
| 1963 34A | | 636 | US | 24 AUG | 12 SEP 63 |
| 1963 34B | | 642 | US | 24 AUG | 8 SEP 63 |
| 1963 35A | | 637 | US | 29 AUG | 7 NOV 63 |
| 1963 35B | | 638 | US | 29 AUG | 23-29 SEP 63 |
| 1963 35C | | 639 | US | 29 AUG | 2 SEP 63 |
| 1963 35D | | 640 | US | 29 AUG | 1 SEP 63 |
| 1963 36A | | 641 | US | 6 SEP | 13 SEP 63 |
| 1963 36B | | 663 | US | 6 SEP | 13-14 SEP 63 |
| 1963 36C | | 664 | US | 6 SEP | 10 SEP 63 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|--------------|
| 1963 LAUNCHES (CONT'D) | | | | | |
| 1963 36D | | 665 | US | 6 SEP | 8 SEP 63 |
| 1963 36E | | 666 | US | 6 SEP | 10-11 SEP 63 |
| 1963 36F | | 667 | US | 6 SEP | 10 SEP 63 |
| 1963 37A | | 668 | US | 24 SEP | 12 OCT 63 |
| 1963 40A | | 673 | USSR | 18 OCT | 28-29 OCT 63 |
| 1963 40B | COSMOS 20 | 676 | USSR | 18 OCT | 30-31 OCT 63 |
| 1963 41A | | 677 | US | 25 OCT | 29 OCT 63 |
| 1963 41B | | 678 | US | 25 OCT | 28-29 OCT 63 |
| 1963 41C | | 679 | US | 25 OCT | 28-29 OCT 63 |
| 1963 41D | | 680 | US | 25 OCT | 28-29 OCT 63 |
| 1963 42A | | 681 | US | 29 OCT | 21 JAN 64 |
| 1963 42B | | 682 | US | 29 OCT | 23 MAY 65 |
| 1963 42C | | 691 | US | 29 OCT | 27 NOV 63 |
| 1963 43C | | 685 | USSR | 1 NOV | 29 OCT 65 |
| 1963 44A | COSMOS 21 | 687 | USSR | 11 NOV | 14 NOV 63 |
| 1963 44B | | 688 | USSR | 11 NOV | 12 NOV 63 |
| 1963 45A | COSMOS 22 | 689 | USSR | 16 NOV | 22 NOV 63 |
| 1963 45B | | 690 | USSR | 16 NOV | 3 DEC 63 |
| 1963 48A | | 695 | US | 27 NOV | 15 DEC 63 |
| 1963 50A | COSMOS 23 | 707 | USSR | 13 DEC | 27 MAR 64 |
| 1963 50B | | 708 | USSR | 13 DEC | 6 MAR 64 |
| 1963 50C | | 709 | USSR | 13 DEC | 3 JAN 64 |
| 1963 50D | | 710 | USSR | 13 DEC | 1 JAN 64 |
| 1963 51A | | 711 | US | 18 DEC | 20 DEC 63 |
| 1963 52A | COSMOS 24 | 712 | USSR | 19 DEC | 28 DEC 63 |
| 1963 52B | | 713 | USSR | 19 DEC | 25 JAN 64 |
| 1963 55A | | 718 | US | 21 DEC | 8 JAN 64 |
| 1963 55B | | 719 | US | 21 DEC | 7 NOV 64 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|---------------|-----------|---------------------|--------|--------|-----------------|
| 1964 LAUNCHES | | | | | |
| 1964 07A | RANGER 6 | 747 | US | 30 JAN | 2 FEB 64 ***** |
| 1964 08A | | 752 | US | 15 FEB | 9 MAR 64 |
| 1964 08B | | 755 | US | 15 FEB | 21 FEB 64 |
| 1964 09A | | 754 | US | 25 FEB | 1 MAR 64 |
| 1964 09B | | 756 | US | 25 FEB | 26 FEB 64 |
| 1964 10A | COSMOS 25 | 757 | USSR | 27 FEB | 21 NOV 64 |
| 1964 10B | | 758 | USSR | 27 FEB | 18 JUN 64 |
| 1964 10C | | 762 | USSR | 27 FEB | 4 MAR 64 |
| 1964 10D | | 763 | USSR | 27 FEB | 23 APR 64 |
| 1964 11B | | 760 | US | 28 FEB | 17 AUG 65 |
| 1964 11C | | 761 | US | 28 FEB | 21 SEP 65 |
| 1964 12A | | 764 | US | 11 MAR | 16 MAR 64 |
| 1964 12B | | 765 | US | 11 MAR | 12 MAR 64 |
| 1964 13A | | 776 | USSR | 18 MAR | 28 SEP 64 |
| 1964 13B | | 767 | USSR | 18 MAR | 17 MAY 64 |
| 1964 13C | COSMOS 26 | 768 | USSR | 18 MAR | 20-22 APR 64 |
| 1964 13D | | 769 | USSR | 18 MAR | 24-25 MAR 64 |
| 1964 14A | | 770 | USSR | 27 MAR | 28 MAR 64 |
| 1964 14B | | 772 | USSR | 27 MAR | 29 MAR 64 |
| 1964 14C | | 773 | USSR | 27 MAR | 30-31 MAR 64 |
| 1964 14D | COSMOS 27 | 774 | USSR | 27 MAR | 3-4 APR 64 |
| 1964 16A | | 776 | USSR | 2 APR | 3 APR 64 |
| 1964 16B | | 777 | USSR | 2 APR | 2 APR 64 |
| 1964 16C | | 778 | USSR | 2 APR | 5 APR 64 |
| 1964 17A | | 779 | USSR | 4 APR | 12 APR 64 |
| 1964 17B | | 780 | USSR | 4 APR | 3 MAY 64 |
| 1964 17C | | 781 | USSR | 4 APR | 6-7 APR 64 |
| 1964 18A | | 782 | US | 8 APR | 12 APR 64 |
| 1964 19A | | 783 | USSR | 12 APR | 30 APR-1 MAY 64 |
| | GEMINI 1 | | | | |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|--------------|
| 1964 LAUNCHES (CONT'D) | | | | | |
| 1964 20A | | 786 | US | 23 APR | 28-29 APR 64 |
| 1964 20B | | 787 | US | 23 APR | 26 APR 64 |
| 1964 20C | | 788 | US | 23 APR | 25 APR 64 |
| 1964 20D | | 789 | US | 23 APR | 25 APR 64 |
| 1964 20E | | 790 | US | 23 APR | 25 APR 64 |
| 1964 21A | COSMOS 29 | 791 | USSR | 25 APR | 2 MAY 64 |
| 1964 21B | | 792 | USSR | 25 APR | 11 MAY 64 |
| 1964 21C | | 793 | USSR | 25 APR | 26-27 APR 64 |
| 1964 21D | | 794 | USSR | 25 APR | 27-28 APR 64 |
| 1964 21E | | 795 | USSR | 25 APR | 27 APR 64 |
| 1964 22A | | 796 | US | 27 APR | 26 MAY 64 |
| 1964 23A | COSMOS 30 | 797 | USSR | 18 MAY | 26 MAY 64 |
| 1964 23B | | 798 | USSR | 18 MAY | 7 JUN 64 |
| 1964 24A | | 799 | US | 19 MAY | 22 MAY 64 |
| 1964 25A | SATURN 6 | 800 | US | 28 MAY | 1 JUN 64 |
| 1964 27A | | 802 | US | 4 JUN | 18 JUN 64 |
| 1964 28A | COSMOS 31 | 803 | USSR | 6 JUN | 20 OCT 64 |
| 1964 28B | | 804 | USSR | 6 JUN | 16 AUG 64 |
| 1964 29A | COSMOS 32 | 807 | USSR | 10 JUN | 18 JUN 64 |
| 1964 29B | | 808 | USSR | 10 JUN | 14 JUL 64 |
| 1964 29C | | 810 | USSR | 10 JUN | 12 JUN 64 |
| 1964 30A | | 811 | US | 13 JUN | 2 JUL 64 |
| 1964 30B | | 820 | US | 13 JUN | 7 AUG 64 |
| 1964 32A | | 814 | US | 19 JUN | 16 AUG 64 |
| 1964 32B | | 821 | US | 19 JUN | 2 JUL 64 |
| 1964 33A | COSMOS 33 | 816 | USSR | 23 JUN | 1 JUL 64 |
| 1964 33B | | 817 | USSR | 23 JUN | 10 JUL 64 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------------|
| 1964 LAUNCHES (CONT'D) | | | | | |
| 1964 33C | | 818 | USSR | 23 JUN | 24 JUN 64 |
| 1964 33D | | 819 | USSR | 23 JUN | 24 JUN 64 |
| 1964 34A | COSMOS 34 | 822 | USSR | 1 JUL | 9 JUL 64 |
| 1964 34B | | 823 | USSR | 1 JUL | 15 JUL 64 |
| 1964 36A | | 825 | US | 6 JUL | 8 JUL 64 |
| 1964 36B | | 826 | US | 6 JUL | 3 JAN 65 |
| 1964 36C | | 827 | US | 6 JUL | 19 JUL 64 |
| 1964 37A | | 828 | US | 10 JUL | 6 AUG 64 |
| 1964 39A | COSMOS 35 | 833 | USSR | 15 JUL | 23 JUL 64 |
| 1964 39B | | 834 | USSR | 15 JUL | 1 AUG 64 |
| 1964 39C | | 835 | USSR | 15 JUL | 31 JUL 64 |
| 1964 39D | | 839 | USSR | 15 JUL | 25 JUL 64 |
| 1964 41A | RANGER 7 | 842 | US | 28 JUL | 31 JUL 64 ***** |
| 1964 42A | COSMOS 36 | 844 | USSR | 30 JUL | 28 FEB 65 |
| 1964 42B | | 845 | USSR | 30 JUL | 29 NOV 64 |
| 1964 43A | | 846 | US | 5 AUG | 31 AUG-1 SEP 64 |
| 1964 44A | COSMOS 37 | 848 | USSR | 14 AUG | 22 SEP 64 |
| 1964 44B | | 849 | USSR | 14 AUG | 3 SEP 64 |
| 1964 45A | | 850 | US | 14 AUG | 23 SEP 64 |
| 1964 45C | | 852 | US | 14 AUG | 16 AUG 64 |
| 1964 46A | COSMOS 38 | 853 | USSR | 18 AUG | 8 NOV 64 |
| 1964 46B | COSMOS 39 | 854 | USSR | 18 AUG | 17 NOV 64 |
| 1964 46C | COSMOS 40 | 855 | USSR | 18 AUG | 18 NOV 64 |
| 1964 46D | | 856 | USSR | 18 AUG | 19 FEB 65 |
| 1964 46E | | 857 | USSR | 18 AUG | 10 SEP 64 |
| 1964 46F | | 859 | USSR | 18 AUG | 6 SEP 64 |
| 1964 46G | | 860 | USSR | 18 AUG | 6 SEP 64 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|--------------|
| 1964 LAUNCHES (CONT'D) | | | | | |
| 1964 48A | COSMOS 41 | 861 | US | 21 AUG | 31 MAR 65 |
| 1964 49A | | 863 | USSR | 22 AUG | 15 SEP 64 |
| 1964 49B | | 865 | USSR | 22 AUG | 28 SEP 64 |
| 1964 49C | | 868 | USSR | 22 AUG | 30 AUG 64 |
| 1964 50B | | 866 | USSR | 22 AUG | 2 AUG 65 |
| 1964 55A | | 880 | USSR | 13 SEP | 18 SEP 64 |
| 1964 55B | | 881 | USSR | 13 SEP | 27 SEP 64 |
| 1964 56A | | 882 | US | 14 SEP | 6 OCT 64 |
| 1964 56B | | 888 | US | 14 SEP | 22 SEP 64 |
| 1964 57A | | 883 | US | 18 SEP | 22 SEP 64 |
| 1964 58A | SATURN 7 | 884 | US | 23 SEP | 28 SEP 64 |
| 1964 58B | | 887 | US | 23 SEP | 26 SEP 64 |
| 1964 59A | | 885 | USSR | 24 SEP | 2 OCT 64 |
| 1964 59B | | 886 | USSR | 24 SEP | 7 OCT 64 |
| 1964 61A | COSMOS 46 | 890 | US | 5 OCT | 26 OCT 64 |
| 1964 62A | | 891 | USSR | 6 OCT | 7 OCT 64 |
| 1964 62B | | 892 | USSR | 6 OCT | 13-14 OCT 64 |
| 1964 62C | | 894 | USSR | 6 OCT | 9 OCT 64 |
| 1964 62D | | 895 | USSR | 6 OCT | 12 OCT 64 |
| 1964 62E | | 896 | USSR | 6 OCT | 9 OCT 64 |
| 1964 65A | | 904 | USSR | 12 OCT | 13 OCT 64 |
| 1964 65B | | 905 | USSR | 12 OCT | 20 OCT 64 |
| 1964 65C | | 906 | USSR | 12 OCT | 13 OCT 64 |
| 1964 66A | | 908 | USSR | 14 OCT | 20 OCT 64 |
| 1964 66B | COSMOS 48 | 909 | USSR | 14 OCT | 28 OCT 64 |
| 1964 66C | | 910 | USSR | 14 OCT | 16 OCT 64 |
| 1964 67A | | 911 | US | 17 OCT | 4 NOV 64 |

DECAYED OBJECTS

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|------------|
| 1964 LAUNCHES (CONT'D) | | | | | |
| 1964 68A | | 912 | US | 23 OCT | 28 OCT 64 |
| 1964 68B | | 914 | US | 23 OCT | 23 FEB 65 |
| 1964 68C | | 916 | US | 23 OCT | 3-4 NOV 64 |
| 1964 68D | | 918 | US | 23 OCT | 29 OCT 64 |
| 1964 69A | COSMOS 49 | 913 | USSR | 24 OCT | 21 AUG 65 |
| 1964 69C | | 917 | USSR | 24 OCT | 17 NOV 64 |
| 1964 69B | | 915 | USSR | 24 OCT | 10 FEB 65 |
| 1964 70A | | 919 | USSR | 28 OCT | 5 NOV 64 |
| 1964 70B | COSMOS 50 | 920 | USSR | 28 OCT | 1-2 NOV 64 |
| 1964 70C | | 928 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70D | | 929 | USSR | 28 OCT | 15 NOV 64 |
| 1964 70E | | 989 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70F | | 990 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70G | | 991 | USSR | 28 OCT | 8 NOV 64 |
| 1964 70H | | 992 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70J | | 993 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70K | | 994 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70L | | 995 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70M | | 996 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70N | | 997 | USSR | 28 OCT | 14 NOV 64 |
| 1964 70P | | 998 | USSR | 28 OCT | 10 NOV 64 |
| 1964 70Q | | 999 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70R | | 1003 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70S | | 1004 | USSR | 28 OCT | 14 NOV 64 |
| 1964 70T | | 1005 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70U | | 1006 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70V | | 1007 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70W | | 1008 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70X | | 1009 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70Y | | 1010 | USSR | 28 OCT | 13 NOV 64 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1964 LAUNCHES (CONT'D) | | | | | |
| 1964 70Z | | 1011 | USSR | 28 OCT | 9 NOV 64 |
| 1964 70AA | | 1012 | USSR | 28 OCT | 10 NOV 64 |
| 1964 70AB | | 1013 | USSR | 28 OCT | 9 NOV 64 |
| 1964 70AC | | 1014 | USSR | 28 OCT | 17 NOV 64 |
| 1964 70AD | | 1015 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70AE | | 1016 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70AF | | 1017 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70AG | | 1018 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70AH | | 1019 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70AJ | | 1020 | USSR | 28 OCT | 14 NOV 64 |
| 1964 70AK | | 1021 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70AL | | 1022 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70AM | | 1023 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70AN | | 1024 | USSR | 28 OCT | 14 NOV 64 |
| 1964 70AP | | 1025 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70AQ | | 1026 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70AR | | 1027 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70AS | | 1028 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70AT | | 1029 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70AU | | 1030 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70AV | | 1031 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70AW | | 1032 | USSR | 28 OCT | 16 NOV 64 |
| 1964 70AX | | 1033 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70AY | | 1034 | USSR | 28 OCT | 9 NOV 64 |
| 1964 70AZ | | 1035 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70BA | | 1036 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70BB | | 1037 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70BC | | 1038 | USSR | 28 OCT | 15 NOV 64 |
| 1964 70BD | | 1039 | USSR | 28 OCT | 13 NOV 64 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1964 LAUNCHES (CONT'D) | | | | | |
| 1964 70BE | | 1040 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70BF | | 1041 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70BG | | 1042 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70BH | | 1043 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70BJ | | 1044 | USSR | 28 OCT | 17 NOV 64 |
| 1964 70BK | | 1045 | USSR | 28 OCT | 17 NOV 64 |
| 1964 70BL | | 1046 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70BM | | 1047 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70BN | | 1048 | USSR | 28 OCT | 14 NOV 64 |
| 1964 70BP | | 1049 | USSR | 28 OCT | 15 NOV 64 |
| 1964 70BQ | | 1050 | USSR | 28 OCT | 14 NOV 64 |
| 1964 70BR | | 1051 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70BS | | 1052 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70BT | | 1053 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70BU | | 1054 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70BV | | 1055 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70BW | | 1056 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70BX | | 1057 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70BY | | 1058 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70BZ | | 1059 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70CA | | 1060 | USSR | 28 OCT | 10 NOV 64 |
| 1964 70CB | | 1061 | USSR | 28 OCT | 9 NOV 64 |
| 1964 70CC | | 1062 | USSR | 28 OCT | 16 NOV 64 |
| 1964 70CD | | 1063 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70CE | | 1064 | USSR | 28 OCT | 15 NOV 64 |
| 1964 70CF | | 1065 | USSR | 28 OCT | 17 NOV 64 |
| 1964 70CG | | 1066 | USSR | 28 OCT | 11 NOV 64 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1964 LAUNCHES (CONT'D) | | | | | |
| 1964 70CH | | 1067 | USSR | 28 OCT | 17 NOV 64 |
| 1964 70CJ | | 1068 | USSR | 28 OCT | 14 NOV 64 |
| 1964 70CK | | 1069 | USSR | 28 OCT | 16 NOV 64 |
| 1964 70CL | | 1070 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70CM | | 1071 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70CN | | 1072 | USSR | 28 OCT | 10 NOV 64 |
| 1964 70CP | | 1073 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70CQ | | 1074 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70CR | | 1075 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70CS | | 1076 | USSR | 28 OCT | 13 NOV 64 |
| 1964 70CT | | 1077 | USSR | 28 OCT | 14 NOV 64 |
| 1964 70CU | | 1078 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70CV | | 1079 | USSR | 28 OCT | 12 NOV 64 |
| 1964 70CW | | 1080 | USSR | 28 OCT | 17 NOV 64 |
| 1964 70CX | | 1081 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70CY | | 1082 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70CZ | | 1083 | USSR | 28 OCT | 11 NOV 64 |
| 1964 70DA | | 1084 | USSR | 28 OCT | 11 NOV 64 |
| 1964 71A | | 921 | US | 2 NOV | 28 NOV 64 |
| 1964 75B | | 930 | US | 18 NOV | 6 DEC 64 |
| 1964 78A | | 943 | USSR | 30 NOV | 1 DEC 64 |
| 1964 78B | | 944 | USSR | 30 NOV | 2 DEC 64 |
| 1964 79A | | 946 | US | 4 DEC | 5 DEC 64 |
| 1964 80B | | 948 | USSR | 9 DEC | 11 MAY 65 |
| 1964 80C | | 950 | USSR | 9 DEC | 29 DEC 64 |
| 1964 80D | | 952 | USSR | 9 DEC | 1 JAN 65 |
| 1964 80E | | 954 | USSR | 9 DEC | 1 JAN 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-------------|---------------------|--------|--------|-----------------|
| 1964 LAUNCHES (CONT'D) | | | | | |
| 1964 80F | | 955 | USSR | 9 DEC | 2 JAN 65 |
| 1964 81A | | 949 | US | 10 DEC | 13 DEC 64 |
| 1964 82A | | 951 | US | 11 DEC | 12 DEC 64 |
| 1964 84A | CENTUAR 4 | 957 | ITALY | 15 DEC | 13 SEP 65 |
| 1964 84B | SAN MARCO 1 | 958 | US | 15 DEC | 6-7 FEB 65 |
| 1964 84C | | 962 | US | 15 DEC | 21 JAN 65 |
| 1964 85A | | 961 | US | 19 DEC | 14 JAN 65 |
| 1964 87A | | 964 | US | 21 DEC | 11 JAN 65 |
| 1965 LAUNCHES | | | | | |
| 1965 01A | | 968 | USSR | 11 JAN | 19 JAN 65 |
| 1965 01B | COSMOS 52 | 969 | USSR | 11 JAN | 29 JAN 65 |
| 1965 01C | | 970 | USSR | 11 JAN | 13-14 JAN 65 |
| 1965 01D | | 971 | USSR | 11 JAN | 13-14 JAN 65 |
| 1965 02A | | 972 | US | 15 JAN | 9 FEB 65 |
| 1965 02B | | 982 | US | 15 JAN | 30 JAN 65 |
| 1965 03B | | 974 | US | 19 JAN | 17 JUN 65 |
| 1965 03C | | 975 | US | 19 JAN | 9 JUL 65 |
| 1965 05A | | 980 | US | 23 JAN | 28-29 JAN 65 |
| 1965 05B | | 981 | US | 23 JAN | 25 JAN 65 |
| 1965 06C | | 985 | USSR | 30 JAN | 4-5 MAR 65 |
| 1965 06D | | 986 | USSR | 30 JAN | 4 MAR 65 |
| 1965 10A | RANGER 8 | 1086 | US | 17 FEB | 20 FEB 65 ***** |
| 1965 12A | COSMOS 57 | 1093 | USSR | 22 FEB | 22 FEB 65 |
| 1965 12B | | 1095 | USSR | 22 FEB | 5-6 MAR 65 |
| 1965 12C | | 1100 | USSR | 22 FEB | 9 MAR 65 |

DECAYED OBJECTS

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 12D | | 1101 | USSR | 22 FEB | 25 FEB 65 |
| 1965 12E | | 1102 | USSR | 22 FEB | 26 FEB 65 |
| 1965 12F | | 1103 | USSR | 22 FEB | 2 MAR 65 |
| 1965 12G | | 1104 | USSR | 22 FEB | 10 MAR 65 |
| 1965 12H | | 1105 | USSR | 22 FEB | 25 FEB 65 |
| 1965 12J | | 1106 | USSR | 22 FEB | 2 MAR 65 |
| 1965 12K | | 1107 | USSR | 22 FEB | 25 MAR 65 |
| 1965 12L | | 1108 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12M | | 1109 | USSR | 22 FEB | 26 FEB 65 |
| 1965 12N | | 1110 | USSR | 22 FEB | 27 FEB 65 |
| 1965 12P | | 1111 | USSR | 22 FEB | 2 MAR 65 |
| 1965 12Q | | 1112 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12R | | 1113 | USSR | 22 FEB | 25 FEB 65 |
| 1965 12S | | 1114 | USSR | 22 FEB | 3 MAR 65 |
| 1965 12T | | 1115 | USSR | 22 FEB | 27 FEB 65 |
| 1965 12U | | 1116 | USSR | 22 FEB | 4 MAR 65 |
| 1965 12V | | 1117 | USSR | 22 FEB | 2 MAR 65 |
| 1965 12W | | 1118 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12X | | 1119 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12Y | | 1120 | USSR | 22 FEB | 2 MAR 65 |
| 1965 12Z | | 1121 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12AA | | 1122 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12AB | | 1123 | USSR | 22 FEB | 27 FEB 65 |
| 1965 12AC | | 1124 | USSR | 22 FEB | 2 MAR 65 |
| 1965 12AD | | 1125 | USSR | 22 FEB | 2 MAR 65 |
| 1965 12AE | | 1126 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12AF | | 1127 | USSR | 22 FEB | 28 FEB 65 |
| 1965 12AG | | 1128 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12AH | | 1129 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12AJ | | 1130 | USSR | 22 FEB | 11 MAR 65 |

DECAYED OBJECTS

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 12AK | | 1131 | USSR | 22 FEB | 7 MAR 65 |
| 1965 12AL | | 1132 | USSR | 22 FEB | 7 MAR 65 |
| 1965 12AM | | 1133 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12AN | | 1134 | USSR | 22 FEB | 19 MAR 65 |
| 1965 12AP | | 1135 | USSR | 22 FEB | 13 MAR 65 |
| 1965 12AQ | | 1136 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12AR | | 1137 | USSR | 22 FEB | 9 MAR 65 |
| 1965 12AS | | 1138 | USSR | 22 FEB | 8 MAR 65 |
| 1965 12AT | | 1139 | USSR | 22 FEB | 10 MAR 65 |
| 1965 12AU | | 1140 | USSR | 22 FEB | 25 MAR 65 |
| 1965 12AV | | 1141 | USSR | 22 FEB | 10 MAR 65 |
| 1965 12AW | | 1142 | USSR | 22 FEB | 14 MAR 65 |
| 1965 12AX | | 1143 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12AY | | 1144 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12AZ | | 1145 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12BA | | 1146 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12BB | | 1147 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12BC | | 1148 | USSR | 22 FEB | 11 MAR 65 |
| 1965 12BD | | 1149 | USSR | 22 FEB | 19 MAR 65 |
| 1965 12BE | | 1150 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12BF | | 1151 | USSR | 22 FEB | 10 MAR 65 |
| 1965 12BG | | 1152 | USSR | 22 FEB | 16 MAR 65 |
| 1965 12BH | | 1153 | USSR | 22 FEB | 7 MAR 65 |
| 1965 12BJ | | 1154 | USSR | 22 FEB | 7 MAR 65 |
| 1965 12BK | | 1155 | USSR | 22 FEB | 7 MAR 65 |

DECAYED OBJECTS

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 12BL | | 1156 | USSR | 22 FEB | 18 MAR 65 |
| 1965 12BM | | 1157 | USSR | 22 FEB | 13 MAR 65 |
| 1965 12BN | | 1158 | USSR | 22 FEB | 4 MAR 65 |
| 1965 12BP | | 1159 | USSR | 22 FEB | 18 MAR 65 |
| 1965 12BQ | | 1160 | USSR | 22 FEB | 4 MAR 65 |
| 1965 12BR | | 1161 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12BS | | 1162 | USSR | 22 FEB | 25 MAR 65 |
| 1965 12BT | | 1163 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12BU | | 1164 | USSR | 22 FEB | 13 MAR 65 |
| 1965 12BV | | 1165 | USSR | 22 FEB | 9 MAR 65 |
| 1965 12BW | | 1166 | USSR | 22 FEB | 7 MAR 65 |
| 1965 12BX | | 1167 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12BY | | 1168 | USSR | 22 FEB | 6 MAR 65 |
| 1965 12BZ | | 1169 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12CA | | 1170 | USSR | 22 FEB | 4 MAR 65 |
| 1965 12CB | | 1171 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12CC | | 1172 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12CD | | 1173 | USSR | 22 FEB | 4 MAR 65 |
| 1965 12CE | | 1174 | USSR | 22 FEB | 22 MAR 65 |
| 1965 12CF | | 1175 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12CG | | 1176 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12CH | | 1177 | USSR | 22 FEB | 27 MAR 65 |
| 1965 12CJ | | 1178 | USSR | 22 FEB | 5 MAR 65 |
| 1965 12CK | | 1179 | USSR | 22 FEB | 16 MAR 65 |
| 1965 12CL | | 1180 | USSR | 22 FEB | 4 MAR 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 12CM | | 1181 | USSR | 22 FEB | 6 MAR 65 |
| 1965 12CN | | 1182 | USSR | 22 FEB | 7 MAR 65 |
| 1965 12CP | | 1183 | USSR | 22 FEB | 8 MAR 65 |
| 1965 12CQ | | 1184 | USSR | 22 FEB | 7 MAR 65 |
| 1965 12CR | | 1185 | USSR | 22 FEB | 11 MAR 65 |
| 1965 12CS | | 1186 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12CT | | 1187 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12CU | | 1188 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12CV | | 1189 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12CW | | 1190 | USSR | 22 FEB | 1 MAR 65 |
| 1965 12CX | | 1194 | USSR | 22 FEB | 16 MAR 65 |
| 1965 12CY | | 1195 | USSR | 22 FEB | 9 MAR 65 |
| 1965 12CZ | | 1196 | USSR | 22 FEB | 9 MAR 65 |
| 1965 12DA | | 1197 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12DB | | 1198 | USSR | 22 FEB | 4 MAR 65 |
| 1965 12DC | | 1199 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12DD | | 1200 | USSR | 22 FEB | 11 MAR 65 |
| 1965 12DE | | 1201 | USSR | 22 FEB | 4 MAR 65 |
| 1965 12DF | | 1202 | USSR | 22 FEB | 9 MAR 65 |
| 1965 12DG | | 1203 | USSR | 22 FEB | 14 MAR 65 |
| 1965 12DH | | 1204 | USSR | 22 FEB | 15 MAR 65 |
| 1965 12DJ | | 1205 | USSR | 22 FEB | 16 MAR 65 |
| 1965 12DK | | 1206 | USSR | 22 FEB | 9 MAR 65 |
| 1965 12DL | | 1209 | USSR | 22 FEB | 11 MAR 65 |
| 1965 12DM | | 1210 | USSR | 22 FEB | 4 MAR 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 12DN | | 1211 | USSR | 22 FEB | 16 MAR 65 |
| 1965 12DP | | 1212 | USSR | 22 FEB | 12 MAR 65 |
| 1965 12DQ | | 1213 | USSR | 22 FEB | 14 MAR 65 |
| 1965 12DR | | 1214 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12DS | | 1215 | USSR | 22 FEB | 16 MAR 65 |
| 1965 12DT | | 1216 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12DU | | 1217 | USSR | 22 FEB | 28 MAR 65 |
| 1965 12DV | | 1218 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12DW | | 1219 | USSR | 22 FEB | 14 MAR 65 |
| 1965 12DX | | 1220 | USSR | 22 FEB | 12 MAR 65 |
| 1965 12DY | | 1221 | USSR | 22 FEB | 18 MAR 65 |
| 1965 12DZ | | 1222 | USSR | 22 FEB | 12 MAR 65 |
| 1965 12EA | | 1223 | USSR | 22 FEB | 31 MAR 65 |
| 1965 12EB | | 1224 | USSR | 22 FEB | 16 MAR 65 |
| 1965 12EC | | 1225 | USSR | 22 FEB | 14 MAR 65 |
| 1965 12ED | | 1226 | USSR | 22 FEB | 18 MAR 65 |
| 1965 12EE | | 1227 | USSR | 22 FEB | 11 MAR 65 |
| 1965 12EF | | 1229 | USSR | 22 FEB | 29 MAR 65 |
| 1965 12EG | | 1230 | USSR | 22 FEB | 13 MAR 65 |
| 1965 12EH | | 1231 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12EJ | | 1232 | USSR | 22 FEB | 24 MAR 65 |
| 1965 12EK | | 1233 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12EL | | 1234 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12EM | | 1235 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12EN | | 1236 | USSR | 22 FEB | 17 MAR 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 12EP | | 1237 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12EQ | | 1238 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12ER | | 1239 | USSR | 22 FEB | 29 MAR 65 |
| 1965 12ES | | 1240 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12ET | | 1241 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12EU | | 1242 | USSR | 22 FEB | 24 MAR 65 |
| 1965 12EV | | 1243 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12EW | | 1254 | USSR | 22 FEB | 12 MAR 65 |
| 1965 12EX | | 1255 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12EY | | 1256 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12EZ | | 1257 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12FA | | 1258 | USSR | 22 FEB | 17 MAR 65 |
| 1965 12FB | | 1261 | USSR | 22 FEB | 6 APR 65 |
| 1965 12FC | | 1262 | USSR | 22 FEB | 15 MAR 65 |
| 1965 12FD | | 1263 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12FE | | 1264 | USSR | 22 FEB | 26 MAR 65 |
| 1965 12FF | | 1265 | USSR | 22 FEB | 15 MAR 65 |
| 1965 12FG | | 1266 | USSR | 22 FEB | 6 MAR 65 |
| 1965 12FH | | 1275 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12FJ | | 1276 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12FK | | 1277 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12FL | | 1278 | USSR | 22 FEB | 22 MAR 65 |
| 1965 12FM | | 1279 | USSR | 22 FEB | 31 MAR 65 |
| 1965 12FN | | 1280 | USSR | 22 FEB | 24 MAR 65 |
| 1965 12FP | | 1281 | USSR | 22 FEB | 19 MAR 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|--------------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 12FQ | | 1282 | USSR | 22 FEB | 21 MAR 65 |
| 1965 12FR | | 1283 | USSR | 22 FEB | 23 MAR 65 |
| 1965 12FS | | 1284 | USSR | 22 FEB | 19 MAR 65 |
| 1965 12FT | | 1295 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12FU | | 1296 | USSR | 22 FEB | 15 MAR 65 |
| 1965 12FV | | 1297 | USSR | 22 FEB | 22 MAR 65 |
| 1965 12FW | | 1299 | USSR | 22 FEB | 20 MAR 65 |
| 1965 12FX | | 1300 | USSR | 22 FEB | 23 MAR 65 |
| 1965 12FY | | 1304 | USSR | 22 FEB | 28 MAR 65 |
| 1965 12FZ | | 1309 | USSR | 22 FEB | 28 MAR 65 |
| 1965 13A | | 1096 | US | 25 FEB | 18 MAR 65 |
| 1965 13B | | 1193 | US | 25 FEB | 10-11 MAR 65 |
| 1965 15A | COSMOS 59 | 1191 | USSR | 7 MAR | 15 MAR 65 |
| 1965 15B | | 1192 | USSR | 7 MAR | 19 MAR 65 |
| 1965 15C | | 1207 | USSR | 7 MAR | 10-11 MAR 65 |
| 1965 17A | | 1303 | US | 11 MAR | 14 JUN 65 |
| 1965 17E | | 1251 | US | 11 MAR | 1 AUG 65 |
| 1965 17F | | 1249 | US | 11 MAR | 10 SEP 65 |
| 1965 17G | | 1319 | US | 11 MAR | 28 JUN 65 |
| 1965 18A | COSMOS 60 | 1246 | USSR | 12 MAR | 17 MAR 65 |
| 1965 18B | | 1252 | USSR | 12 MAR | 16-17 MAR 65 |
| 1965 18C | | 1253 | USSR | 12 MAR | 15 MAR 65 |
| 1965 19A | | 1247 | US | 12 MAR | 17 MAR 65 |
| 1965 19B | | 1259 | US | 12 MAR | 16 MAR 65 |
| 1965 19C | | 1260 | US | 12 MAR | 21 MAR 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-------------|---------------------|--------|--------|-----------------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 20AB | | 1356 | USSR | 15 MAR | 14 AUG 65 |
| 1965 20AG | | 1375 | USSR | 15 MAR | 14 OCT 65 |
| 1965 20AL | | 1400 | USSR | 15 MAR | 5 OCT 65 |
| 1965 20AT | | 1417 | USSR | 15 MAR | 9 SEP 65 |
| 1965 20AU | | 1418 | USSR | 15 MAR | 10 AUG 65 |
| 1965 20AX | | 1437 | USSR | 15 MAR | 28 OCT 65 |
| 1965 20AV | | 1419 | USSR | 15 MAR | 1 SEP 65 |
| 1965 20BU | | 1494 | USSR | 15 MAR | 4 SEP 65 |
| 1965 20DG | | 1560 | USSR | 15 MAR | 13 OCT 65 |
| 1965 21B | | 1288 | US | 18 MAR | 5 OCT 65 |
| 1965 21D | | 1290 | US | 18 MAR | 1 OCT 65 |
| 1965 22A | VOSKHOD 2 | 1274 | USSR | 18 MAR | 19 MAR 65 |
| 1965 22B | | 1285 | USSR | 18 MAR | 27 MAR 65 |
| 1965 22C | | 1286 | USSR | 18 MAR | 25 MAR 65 |
| 1965 22D | | 1287 | USSR | 18 MAR | 19 MAR 65 |
| 1965 23A | RANGER 9 | 1294 | US | 21 MAR | 24 MAR 65 |
| 1965 24A | GT-3 | 1301 | US | 23 MAR | 23 MAR 65 ***** |
| 1965 24B | | 1302 | US | 23 MAR | 24 MAR 65 |
| 1965 25A | COSMOS 64 | 1305 | USSR | 25 MAR | 2 APR 65 |
| 1965 25B | | 1306 | USSR | 25 MAR | 4 APR 65 |
| 1965 25C | | 1308 | USSR | 25 MAR | 26 APR 65 |
| 1965 26A | | 1307 | US | 25 MAR | 4-5 APR 65 |
| 1965 29A | COSMOS 65 | 1320 | USSR | 17 APR | 25 APR 65 |
| 1965 29B | ROCKET BODY | 1321 | USSR | 17 APR | 6 MAY 65 |
| 1965 29C | | 1322 | USSR | 17 APR | 20 APR 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-------------|---------------------|--------|--------|----------------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 30B | ROCKET BODY | 1325 | USSR | 23 APR | 20 JUL 65 |
| 1965 30C | | 1326 | USSR | 23 APR | 2 JUL 65 |
| 1965 31A | | 1327 | US | 28 APR | 3 MAY 65 |
| 1965 31C | | 1331 | US | 28 APR | 30 APR 65 |
| 1965 31D | | 1332 | US | 28 APR | 30 APR 65 |
| 1965 31E | | 1333 | US | 28 APR | 3-4 MAY 65 |
| 1965 31F | | 1334 | US | 28 APR | 8 MAY 65 |
| 1965 33A | | 1330 | US | 29 APR | 26 MAY 65 |
| 1965 33B | | 1367 | US | 29 APR | 8 JUN 65 |
| 1965 35A | | 1362 | USSR | 7 MAY | 15 MAY 65 |
| 1965 35B | COSMOS 66 | 1363 | USSR | 7 MAY | 24 MAY 65 |
| 1965 35C | | 1364 | USSR | 7 MAY | 9 MAY 65 |
| 1965 35D | | 1365 | USSR | 7 MAY | 9 MAY 65 |
| 1965 36A | | 1366 | USSR | 9 MAY | 12 MAY 65 |
| 1965 36B | | 1368 | USSR | 9 MAY | 10 MAY 65 |
| 1965 36C | | 1369 | USSR | 9 MAY | 10 MAY 65 |
| 1965 37A | | 1374 | US | 18 MAY | 16 JUN 65 |
| 1965 37B | | 1415 | US | 18 MAY | 2 JUN 65 |
| 1965 40A | | 1382 | USSR | 25 MAY | 2 JUN 65 |
| 1965 40B | ROCKET BODY | 1383 | USSR | 25 MAY | 4 JUN 65 |
| 1965 40C | | 1384 | USSR | 25 MAY | 30-31 MAY 65 |
| 1965 40D | | 1387 | USSR | 25 MAY | 30-31 MAY 65 |
| 1965 41A | | 1386 | US | 25 MAY | 1 JUN 65 |
| 1965 43A | | 1390 | US | 3 JUN | 7 JUN 65 ***** |
| 1965 43B | | 1391 | US | 3 JUN | 5 JUN 65 |
| | GT-4 | | | | |
| | ROCKET BODY | | | | |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|-----------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 44B | | 1394 | USSR | 8 JUN | 12 JUN 65 |
| 1965 44C | | 1395 | USSR | 8 JUN | 10 JUN 65 |
| 1965 45A | | 1396 | US | 9 JUN | 22 JUN 65 |
| 1965 45B | | 1414 | US | 9 JUN | 20 JUN 65 |
| 1965 46A | COSMOS 68 | 1404 | USSR | 15 JUN | 23 JUN 65 |
| 1965 46B | | 1405 | USSR | 15 JUN | 7 JUL 65 |
| 1965 46C | | 1406 | USSR | 15 JUN | 20 JUN 65 |
| 1965 46D | | 1407 | USSR | 15 JUN | 19 JUN 65 |
| 1965 46E | | 1408 | USSR | 15 JUN | 19 JUN 65 |
| 1965 47A | | 1412 | US | 18 JUN | 29 JUN 65 |
| 1965 47B | | 1413 | US | 18 JUN | 21 JUN 65 |
| 1965 49A | COSMOS 69 | 1421 | USSR | 25 JUN | 3 JUL 65 |
| 1965 49B | | 1423 | USSR | 25 JUN | 6 JUL 65 |
| 1965 49C | | 1429 | USSR | 25 JUN | 30 JUN 65 |
| 1965 50B | | 1424 | US | 25 JUN | 30 JUN 65 |
| 1965 50C | | 1426 | US | 25 JUN | 27 JUN 65 |
| 1965 54A | PROTON 1 | 1466 | USSR | 16 JUL | 11 OCT 65 |
| 1965 54B | | 1451 | USSR | 16 JUL | 18 SEP 65 |
| 1965 54C | | 1450 | USSR | 16 JUL | 24 JUL 65 |
| 1965 54D | | 1446 | USSR | 16 JUL | 31 JUL 65 |
| 1965 56B | | 1453 | USSR | 18 JUL | 20 JUL 65 |
| 1965 56C | | 1456 | USSR | 18 JUL | 21 JUL 65 |
| 1965 61A | COSMOS 77 | 1469 | USSR | 3 AUG | 11 AUG 65 |
| 1965 61B | | 1470 | USSR | 3 AUG | 8 AUG 65 |
| 1965 62A | | 1471 | US | 3 AUG | 7 AUG 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|----------------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 52C | | 1434 | USSR | 2 JUL | 13 AUG 65 |
| 1965 57A | | 1457 | US | 19 JUL | 18 AUG 65 |
| 1965 62C | | 1474 | US | 3 AUG | 6 AUG 65 |
| 1965 66A | COSMOS 78 | 1505 | USSR | 14 AUG | 22 AUG 65 |
| 1965 66B | | 1507 | USSR | 14 AUG | 3 SEP 65 |
| 1965 66C | | 1509 | USSR | 14 AUG | 17 AUG 65 |
| 1965 67A | | 1513 | US | 17 AUG | 11 OCT 65 |
| 1965 68A | GT-5 | 1516 | US | 21 AUG | 29 AUG 65***** |
| 1965 68C | | 1518 | US | 21 AUG | 27 AUG 65 |
| 1965 68D | | 1519 | US | 21 AUG | 26 AUG 65 |
| 1965 69A | COSMOS 79 | 1523 | USSR | 25 AUG | 7 SEP 65 |
| 1965 69B | | 1524 | USSR | 25 AUG | 7 SEP 65 |
| 1965 69C | | 1525 | USSR | 25 AUG | 26 AUG 65 |
| 1965 69D | | 1526 | USSR | 25 AUG | 31 AUG 65 |
| 1965 69E | | 1527 | USSR | 25 AUG | 31 AUG 65 |
| 1965 71A | COSMOS 85 | 1528 | USSR | 9 SEP | 17 SEP 65 |
| 1965 71B | | 1579 | USSR | 9 SEP | 18 SEP 65 |
| 1965 74A | | 1602 | US | 22 SEP | 11 OCT 65 |
| 1965 75A | COSMOS 91 | 1603 | USSR | 23 SEP | 1 OCT 65 |
| 1965 75B | | 1604 | USSR | 23 SEP | 4 OCT 65 |
| 1965 75C | | 1605 | USSR | 23 SEP | 29 SEP 65 |
| 1965 75D | | 1606 | USSR | 23 SEP | 29 SEP 65 |
| 1965 75E | | 1607 | USSR | 23 SEP | 29 SEP 65 |
| 1965 76A | | 1609 | US | 30 SEP | 5 OCT 65 |
| 1965 76B | | 1614 | US | 30 SEP | 3 OCT 65 |

DECAYED OBJECTS (CONTINUED)

| OBJECT | CODE NAME | CATALOGUE NUMBER | SOURCE | LAUNCH | DECAY |
|------------------------|-----------|---------------------|--------|--------|---------------|
| 1965 LAUNCHES (CONT'D) | | | | | |
| 1965 77A | LUNA 7 | 1610 | USSR | 4 OCT | 7 OCT 65***** |
| 1965 77B | | 1611 | USSR | 4 OCT | 4 OCT 65 |
| 1965 77C | | 1612 | USSR | 4 OCT | 5 OCT 65 |
| 1965 79A | | 1615 | US | 5 OCT | 29 OCT 65 |
| 1965 80C | COSMOS 92 | 1622 | USSR | 13 OCT | 22 OCT 65 |
| 1965 83A | | 1626 | USSR | 16 OCT | 24 OCT 65 |
| 1965 83B | | 1627 | USSR | 16 OCT | 29 OCT 65 |
| 1965 83C | | 1628 | USSR | 16 OCT | 25 OCT 65 |
| 1965 84C | | 1631 | USSR | 19 OCT | 25 OCT 65 |
| 1965 84D | | 1632 | USSR | 19 OCT | 26 OCT 65 |

* USSR ANNOUNCED SUCCESSFUL RE-ENTRY AND RECOVERY
** SUCCESSFUL RE-ENTRY AND RECOVERY
*** SUCCESSFUL RE-ENTRY, BUT NOT RECOVERY
**** USSR ANNOUNCED SUCCESSFUL RE-ENTRY AND RECOVERY OF MANNED SPACE VEHICLE
***** HIT MOON
***** U'S SUCCESSFULLY ORBITED AND RECOVERED A MANNED SPACE VEHICLE